TRANE®

Commercial Self-Contained

Deluxe Self-Contained Units

3 –15 Ton Water-Cooled and
Air-Cooled Air Conditioners
Remote Air-Cooled Condensers

December 2001

PKG-PRC010-EN

Introduction

Deluxe Self-Contained Units — Commercial and Industrial Quality Built into Each Unit

Deluxe self-contained units are single packaged units designed for low-cost installation in the conditioned space or equipment room.

Features include:

- Water-cooled or air-cooled
- Vertical or horizontal fan discharge options, ducted or free return
- Return air options include front or rear
- Easy-to-connect piping and power from either side of unit
- Fully assembled and factory-tested
- Optional accessories:
  - plenums
  - cupronickel water-cooled condensers
  - hot water or steam coils

Industrial options with protective coatings are available to help increase resistance to acids, mild alkalides, solvents, inorganic salts, and water:

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Features and Benefits

Deluxe Self-Contained air conditioners, available in 3–15 tons, are single package units designed for low cost installation in the conditioned space or equipment room. Durable construction, strict quality control, and demanding factory testing ensure reliability from start-up through years of operation.

All units are shipped fully factory assembled and tested, thereby reducing field labor, installation time, and costs. They can also be easily converted from vertical to horizontal discharge arrangements to match most building configurations. Discharge can be either free or ducted. Power and water connections can be made from either side of the unit adding to the unit flexibility.

Standard Features
- 3 through 15-ton industrial/commerical self-contained units
- Water-cooled or air-cooled condensing applications
- Single point power connection
- Single point water connection on water-cooled units
- Both water and power connections can be made from either side of the unit
- Front or rear return air openings
- Vertical and horizontal discharge arrangements
- UL listing on standard unit
- All compressors are protected with internal motor winding temperature cutouts
- All compressors have crankcase heaters as standard
- Variable pitch sheaves allow for field adjustment of airflow
- High pressure cutout switches on all units
- Low pressure cutout switches on all units
- High pressure relief device on water-cooled units

Optional Features
- Hydronic heating coils
- Horizontal discharge plenums
- Water regulating valves for condensing pressure control on water-cooled units
- Protective coating for unit and evaporator coil
- CuproNickel condensers
- Permanent filters
- Unit or remote mounted thermostats
- Low ambient control operation on air-cooled condenser
- Oversized fan motor and drive kits

Available Unit Configurations 3, 5, and 7.5-Ton Units

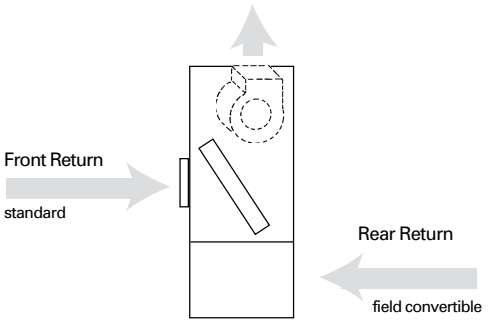


Figure FB-1. Deluxe Self-Contained 3, 5, & 7.5-Ton Unit With Vertical Discharge, As Shipped

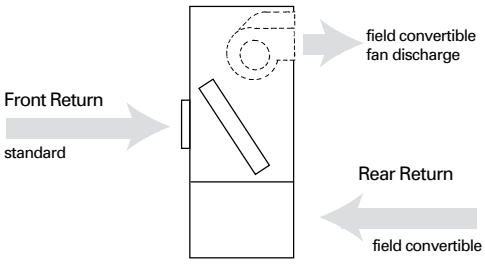


Figure FB-2. Deluxe Self-Contained 3, 5, & 7.5-Ton Unit With Horizontal Discharge, Field Converted

Features and Benefits

Available Unit Configurations
10 and 15-Ton Units

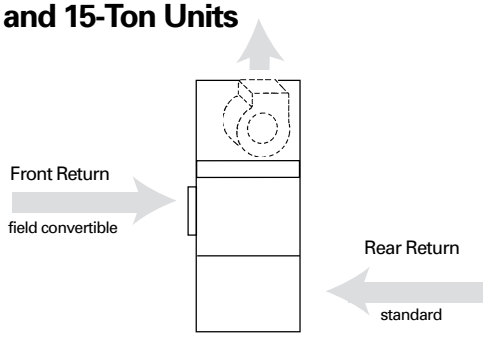


Figure FB-3. Deluxe Self-Contained 10 & 15-Ton Unit With Counter-Clockwise Vertical Discharge, As Shipped

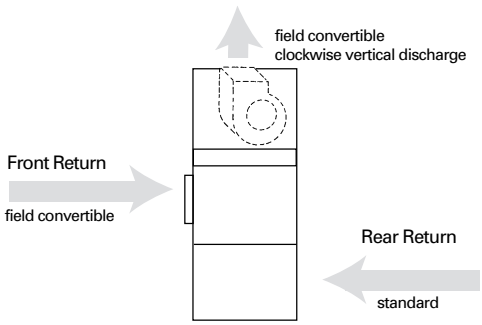


Figure FB-4. Deluxe Self-Contained 10 & 15-Ton Unit With Clockwise Vertical Discharge, Field Converted

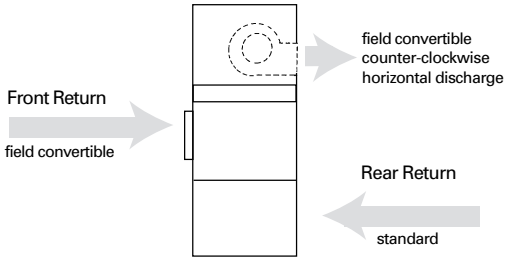


Figure FB-5. Deluxe Self-Contained 10 & 15-Ton Unit With Counter-Clockwise Horizontal Discharge, Field Converted

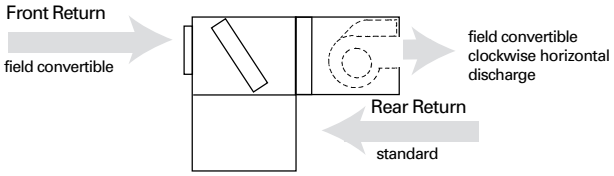


Figure FB-6. Deluxe Self-Contained 10 & 15-Ton Unit With Clockwise Horizontal Discharge, Field Converted

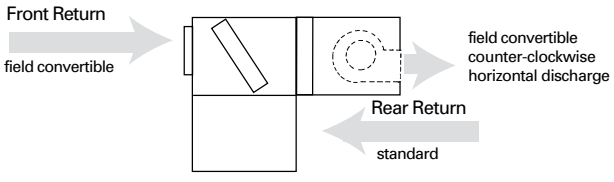


Figure FB-7. Deluxe Self-Contained 10 & 15-Ton Unit With Counter-Clockwise Horizontal Discharge, Field Converted

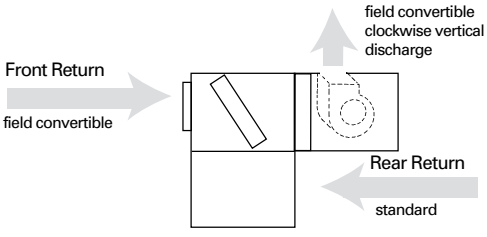


Figure FB-8. Deluxe Self-Contained 10 & 15-Ton Unit With Clockwise Vertical Discharge, Field Converted

Application Considerations

CCRA Air-Cooled Condenser

CCRA Unit Location
Unobstructed condenser airflow is essential to maintain capacity and operating efficiency. When determining unit placement, give careful consideration to assure sufficient airflow across the condenser coils. Avoid these two detrimental conditions: warm air recirculation and coil starvation.

Both warm air recirculation and coil starvation cause reductions in unit efficiency and capacity because of the higher head pressure associated with them. In more severe cases, nuisance unit shutdowns will result from excessive head pressures.

Clearance
Ensure vertical condenser air discharge is unobstructed. While it is difficult to predict the degree of warm air recirculation, a unit installed with a ceiling or other obstruction above it will experience a capacity reduction that will reduce the maximum ambient operation. Nuisance high head pressure tripouts may also occur.

The coil inlet must also be unobstructed. A unit installed closer than the minimum recommended distance to a wall or other vertical riser will experience a combination of coil starvation and warm air recirculation. This may result in unit capacity and efficiency reductions, as well as possible excessive head pressures. Reference the service clearance section on page 45 for recommended lateral distances.

Ambient Limitations
Standard ambient control allows operation down to 45°F (7.2°C) with cycling of condenser fans. Units with the low ambient option are capable of starting and operating in ambient temperatures down to 0°F (-17.8°C). Optional low ambient units use a condenser fan damper arrangement that controls condenser capacity by modulating damper airflow in response to saturated condenser temperature.

Maximum cataloged ambient temperature operation of a standard condenser is 115°F (46.1°C). Operation at design ambient above 115°F can result in excessive head pressures. For operation above 115°F, contact the local Trane sales office.

Selection Procedure

Selection Procedure

The selection of a deluxe self-contained unit can be accomplished in three easy steps.

Step 1 - Load
Determine the load requirements for heating and cooling (include outside air) using Trane's load estimate program or any standard method.

Step 2 - Unit Type
Self-contained air conditioners are available in either water-cooled or remote air-cooled models to match individual needs.

Step 3 - Select the Unit
The conditions under which the unit must operate and the design load will give the final selection.

Selection Example
Design conditions for a water-cooled unit:
Entering air temperature = 80/67°F
Total gross capacity required = 64,400 Btu/h
Entering water temperature = 85°F
Leaving water temperature = 95°F
Airflow = 2,400 cfm at 0.5-inch duct static pressure

Unit Selection
Tentatively select a 5-ton unit: Model SCWB-B50. Refer to Table PD-10 on page 21 to obtain gross total and sensible unit capacities, gpm, and leaving water temperature at nominal conditions:
Total capacity = 66 MBh
Sensible capacity = 45 MBh
Water flow rate = 20 gpm
Leaving water temperature = 93.1°F

Since the design cfm is greater than the nominal cfm, the capacities and condenser water delta T must be adjusted to reflect the higher cfm.

Design cfm = 2,400
Nominal cfm = 2,000 + 20% of nominal cfm

Refer to Table PD-6 on page19 to obtain the capacity correction factors for +20% of nominal cfm:
Cooling capacity multiplier = 1.03
Sensible capacity multiplier = 1.05

Multiply the capacities by the correction factors:
66 MBh x 1.03 = 68.0 MBh
45 MBh x 1.05 = 47.3 MBh

The SCWB-B50 meets the total and sensible design requirements.

Subtract the entering water temperature from the leaving water temperature to determine condenser water delta T of 8.1°F. Multiply the delta T by the cooling capacity correction factor of 1.03 to obtain the new delta T of 8.3°F and add this to the entering water temperature to obtain the actual leaving water temperature of 93.3°F. The leaving condenser water temperature is within the design delta T of 10°F.

Refer the fan data Table PD-1 on page 14 to determine approximate brake horsepower and fan rpm:
Fan brake horsepower = 1.09 bhp
Fan rpm = 934 rpm

Determine net capacities by subtracting fan motor heat from gross capacities:
2.8 X 1.09 bhp = 3.1 MBh
Net total capacity = 67.8 MBh - 3.1 MBh = 64.7 MBh
Net sensible capacity = 48.7MBh - 3.1 MBh = 45.6 MBh

Refer to the Trane psychrometric chart to determine leaving air temperatures.

Deluxe Self-Contained Model Number Description

Following is a complete description of the deluxe self-contained model number. Each digit in the model number has a corresponding code that identifies specific unit options.

S	C	W	B	B30	4	4	* *	1	0	1	1	A	0	1	2	A	A	0	0	F	A	0	1	0	0	U
1	2	3	4	567	8	9	1011	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30

Digit 1 - Unit Model
S = Self Contained

Digit 2 - Unit Type
C = Commercial
I = Industrial

Digit 3 - Condenser Medium
W = Water-Cooled
R = Remote Air-Cooled

Digit 4 - Development Sequence
B = Development Series

Digit 5, 6, 7 - Unit Nominal Capacity
B30 = 3 Tons
B50 = 5 Tons
B75 = 7.5 Tons
C10 = 10 Tons
C15 = 15 Tons

Digit 8 - Unit Voltage
4 = 460 Volt/60 Hz/3 ph
5 = 575 Volt/60 Hz/3 ph
6 = 208-230 Volt/60 Hz/3 ph

Digit 9 - Air Volume/Temp Control
4 = CV - Zone Temp Cool Only
5 = CV - Zone Temp Heat/Cool
0 = CV - With No Temp Control

Digit 10, 11 - Design Sequence
** = Factory Assigned

Digit 12 - Unit Construction
1 = Vertical Discharge with Front Return
3 = Vertical Discharge with Rear Return

Digit 13 - Plenum Type
0 = Without Plenum

Digit 14 - Motor Type
1 = Standard Motor

Digit 15 - Fan Drive Kits
1 = Standard Drive Kit

Digit 16 - Filter Type
A = 1″ Construction Throwaway

Digit 17 - Heating Type
0 = Without Factory Installed Heat

Digit 18 - Unit Finish
1 = Paint - Deluxe Beige
2 = Protective Coating
3 = Protective Coating with Finish Coat

Digit 19 - Unit Connection
2 = Terminal Block

Digit 20 - Coil Option
A = Non-coated Aluminum Evaporator
C = Corrosion Protective Coated Aluminum Evaporator

Digit 21 - Drain Pan Type
A = Galvanized Standard

Digit 22 - Economizer Type
0 = Without Unit Economizer

Digit 23 - Waterside Valves
0 = Without Water Valve(s)

Digit 24 - Unit Insulation
F = Matte-Faced Fiberglass Insulation

Digit 25 - Condenser Type
A = Standard Condenser
E = 90/10 CuNi Condenser
0 = Without Condenser

Digit 26 - Compressor Service Valves
0 = Without Service Valves

Digit 27 - Temperature Control
0 = Remote Thermostat Interface
1 = Standard Unit Mounted Thermostat
3 = Remote Thermostat, 0H/2C
4 = Remote T'stat, 2H/2C (Manual)
5 = Remote T'stat, 2H/2C (Auto)
6 = Remote Prog. T'stat, 1H/2C
7 = Remote Prog. T'stat. 2H/2C

Digit 28 - System Control
0 = Without System Control

Digit 29 - Control Options
0 = No System Control Options

Digit 30 - Agency Listing
B = UL and CSA Agency Approval
T = CSA Agency Approval
U = UL Agency Approval
0 = No Agency Approval

Self-Contained Accessory Model Number Description

A	1	0	1	0	0	A	0	B	0	0	2	0	2	A	1	0	0
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

Digit 1 - Discharge Plenum
A = 3 Ton Standard Plenum
B = 3 Ton Protective Coated Plenum
C = 5 Ton Standard Plenum
D = 5 Ton Protective Coated Plenum
E = 7.5 Ton Standard Plenum
F = 7.5 Ton Protective Coated Plenum
G = 10 Ton Standard Plenum
H = 10 Ton Protective Coated Plenum
I = 15 Ton Standard Plenum
J = 15 Ton Protective Coated Plenum
0 = None

Digit 2 - Permanent Filters
1 = 3 Ton (1) 20 x 25 x 1
2 = 5 Ton (2) 16 x 25 x 1
3 = 7.5 Ton (4) 15 x 20 x 1
4 = 10 Ton (3) 20 x 25 x 2
5 = 15 Ton (8) 15 x 20 x 2
0 = None

Digit 3 - Front Return Air Grille
A = 10 Ton Front Return Air Grille
B = 10 Ton Protective Coated Front Rtn Air Grille
C = 15 Ton Front Return Air Grille
D = 15 Ton Protective Coated Front Rtn Air Grille
0 = None

Digit 4 - Rubber-In-Shear Isolators
1 = 3 Ton Isolators
2 = 5 Ton Isolators
3 = 7.5 Ton Isolators
4 = 10 Ton Standard Configuration Isolators
5 = 10 Ton Horz. Inverted "L" Isolators (Air-Cooled Units Only)
6 = 10 Ton Horz. Inverted "L" Isolators (Water-Cooled Units Only)
7 = 15 Ton Standard Configuration Isolators
8 = 15 Ton Horz. Inverted "L" Isolators (Air and Water-Cooled Units)
0 = None

Digit 5 - Steel Spring Isolators
A = 3 Ton Isolators
B = 5 Ton Isolators
C = 7.5 Ton Isolators
D = 10 Ton Standard Configuration Isolators (Air-Cooled Units Only)
E = 10 Ton Standard Configuration Isolators (Water-Cooled Units Only)
F = 10 Ton Horz. Inverted "L" Isolators (Air and Water-Cooled Units)
G = 15 Ton Standard Configuration Isolators
H = 15 Ton Horz. Inverted "L" Isolators (Air and Water Cooled Units)
0 = None

Digit 6 - Unit Mounted Thermostat
1 = 10 & 15 Ton 2 Cool Thermostat
2 = 3, 5, & 7.5 Ton 2 Cool Thermostat
0 = None

Digit 7 - Remote Mounted Thermostat
A = 3, 5, & 7.5 Ton 0H/2C (Auto)
B = 10 & 15 Ton 2H/2C (Manual)
C = 10 & 15 Ton 2H/2C (Auto)
0 = None

Digit 8 - Programmable Night Setback Thermostat
1 = 3, 5, & 7.5 Ton 1H/2C
2 = 10 & 15 Ton 2H/2C
0 = None

Digit 9 - Fan Motor Kits (Includes Drives)
A = 3 Ton, ¾ HP, 208-230 Volt
B = 3 Ton, ¾ HP, 460 Volt
C = 5 Ton, 1 HP, 208-230 Volt
D = 5 Ton, 1 HP, 460 Volt
E = 5 Ton, 1-½ HP, 208-230 Volt
F = 5 Ton, 1-½ HP, 460 Volt
G = 7.5 Ton, 1-½ HP, 208-230 & 460 Volt
0 = None

Digit 10 - Oversize Fan Motor Kits
1 = 10 Ton, 3 HP, 208-230 & 460 Volt
2 = 15 Ton, 5 HP, 208-230 & 460 Volt
0 = None

Digit 11 - Accessory Drive Kits
A = 10 Ton, Underspeed Drive Kit
B = 15 Ton, Underspeed Drive Kit
C = 10 & 15 Ton, Overspeed Drive Kit
D = 15 Ton, Extra Overspeed Drive Kit
0 = None

Digit 12 - Hot Water Heating Coil
1 = 3 Ton
2 = 3 Ton with Corrosion Protection
3 = 5 Ton
4 = 5 Ton with Corrosion Protection
5 = 7.5 Ton
6 = 7.5 Ton with Corrosion Protection
7 = 10 Ton
8 = 10 Ton with Corrosion Protection
9 = 15 Ton
A = 15 Ton with Corrosion Protection
0 = None

Digit 13 - Steam Heating Coil
A = 3 Ton
B = 3 Ton with Corrosion Protection
C = 5 Ton
D = 5 Ton with Corrosion Protection
E = 7.5 Ton
F = 7.5 Ton with Corrosion Protection
G = 10 Ton
H = 10 Ton with Corrosion Protecton
I = 15 Ton
J = 15 Ton with Corrosion Protection
0 = None

Digit 14 - 90/10 Cupronickel Condensers
1 = 3 Ton CuNi Condenser
2 = 3 Ton CuNi Protective Coated Condenser
3 = 5 Ton CuNi Condenser
4 = 5 Ton CuNi Protective Coated Condenser
5 = 7.5 Ton CuNi Condenser
6 = 7.5 Ton CuNi Protective Coated Condenser
7 = 10 Ton CuNi Condenser
8 = 10 Ton CuNi Protective Coated Condenser
9 = 15 Ton CuNi Condenser
A = 15 Ton CuNi Protective Coated Condenser

Digit 15 - Water Regulating Valve Kit
A = 3 Ton Water Reg. Valve Kit
B = 5 & 7.5 Ton Water Reg. Valve Kit
C = 10 & 15 Ton Water Reg. Valve Kit

Digit 16 - Anti-Recycle Timer
1 = Anti-Recycle Timer
0 = None

Digit 17 - Time Delay Relay
1 = 10 & 15 Ton Time Delay Relay
0 = None

Digit 18 - Low Ambient Damper
A = 3 & 5 Ton Low Ambient Damper
B = 7.5 Ton Low Ambient Damper
C = 10 Ton Low Ambient Damper
D = 15 Ton Low Ambient Damper
0 = None

Remote Air-Cooled Condenser

C	C	R	A	B50	2	0	* *	4	A	U
1	2	3	4	567	8	9	10 11	12	13	14

Digit 1 - Unit Model
C = Condenser

Digit 2 - Unit Type
C = Commercial
I = Industrial

Digit 3 - Condenser Medium
R = Remote Air-cooled

Digit 4 - Development Sequence
A = A

Digit 5, 6, 7 - Nominal Capacity
B30 = 3 Tons
B50 = 5 Tons
B75 = 7.5 Tons
C10 = 10 Tons
C15 = 15 Tons

Digit 8 - Unit Voltage
1 = 208-230 Volt/60 Hz/1 ph
2 = 460 Volt/60 Hz/1 ph
8 = 575 Volt/60 Hz/1 ph

Digit 9 - Low Ambient
C = Low Ambient Damper(s)
0 = Without Low Ambient Control

Digit 10, 11 - Design Sequence
** = Factory Assigned

Digit 12 - Unit Finish
2 = Protective Coating
3 = Protective Coating with Finish Coat
4 = Unpainted Unit

Digit 13 - Coil Options
A = Non-Coated Aluminum
C = Protective Coated Aluminum

Digit 14 - Agency Listing
B = UL and CSA Agency Approval
T = CSA Agency Approval
U = UL Agency Approval
0 = No Agency Approval

General Data

Self-Contained

Table GD-1. SCRB/SIRB/SCWB/SIWB Deluxe Self-Contained General Data

Unit Size	3	5	7.5	10	15
Compressor Data					
Quantity	1	1	1	2	2
Nominal Ton/Comp	3	5	7.5	5	7.5
Circuits	1	1	1	2	2
Evaporator Coil Data					
Rows	3	3	3	3	3
Sq. Ft.	2.68	5.08	7.08	9.82	16.04
Sq. m	(.25)	(.47)	(.66)	(.91)	(1.49)
FPF	144	144	144	144	144
Condenser Data (Water-Cooled Only)					
Quantity	1	2	2	2	2
Minimum gpm	5	8	11	15	23
Minimum liters / sec.	(.32)	(.50)	(.69)	(.95)	(1.45)
Maximum gpm	12	20	30	40	50
Maximum liters / sec.	(.76)	(1.26)	(1.89)	(2.52)	(3.15)
Minimum EWT w/out valve, °F	65	65	65	65	65
Minimum EWT with valve, °F	35	35	35	35	35
Evaporator Fan Data					
Quantity	1	1	1	2	2
Size Dia. x width - inches	10 x 10	12 x 12	15 x 15	12 x 9	12 x 9
Size Dia. x width - mm	(254x254)	(305x305)	(381x381)	(305x229)	(305x229)
Standard HP	1/2	3/4	1	2	3
Oversized HP Available	3/4	1, 1-1/2	1-1/2	3	5
Minimum Design cfm	960	1600	2400	3200	4800
Minimum Design liter / sec.	(453)	(755)	(1133)	(1510)	(2265)
Maximum Design cfm	1440	2400	3600	4800	7200
Maximum Design liter / sec.	(680)	(1133)	(1699)	(2265)	(3398)
General Data					
EER (SXRB)	10.0	10.0	10.3	10.3	9.7
EER (SXWB)	12.1	12.1	11.5	11.5	12.0
Refrigerant Charge - lbs. R-22 per Circuit					
Total Charge (SXWB)	6.0	11.0	10.0	8.0/8.0	7.5/7.5
Refrigerant Charge - kg R-22					
Total Charge (SXWB)	(2.18)	(3.63)	(3.99)	(5.35)	(7.26)
Capacity Steps - %	100/0	100/0	100/0	100/50/0	100/50/0
Filter Data					
Quantity	1	2	4	3	8
Size (inches)	20x25x1	16x25x1	15x20x1	20x25x1	15x20x1
Size (mm)	(508x635x25)	(406x635x25)	(381x508x25)	(508x635x25)	(381x508x25)
Heating Coil Data					
Steam Coil					
Coil Type	SDS	SDS	SDS	NS	NS
Rows	1	1	1	1	1
Size (inches)	12 x 23 1/4	15 x 28	18 x 31 15/16	12 x 53	12 x 73
Size (mm)	(305 x 591)	(381 x 711)	(457 x 811)	(305 x 1346)	(305 x 1854)
FPF	180	180	180	144	144
Hot Water Coil					
Coil Type	WC	WC	WC	WC	WC
Rows	2	2	2	2	2
Size (inches)	15 x 20 7/16	15 x 25	15 x 29 5/8	20 x 54 5/8	20 x 75 5/8
Size (mm)	(381 x 519)	(381 x 635)	(381 x 737)	(742 x 1388)	(508 x 1921
FPF	108	108	108	108	108

Notes:
1. All units operate with R-22. Water-cooled units ship with full operating charge. Air-cooled units ship with a dry nitrogen holding charge.
2. Hot water coils do not have turbulators. See Capacity DataTables PD-19 and PD-20 for coil capacities.
3. Steam Coil capacities are shown in Table PD-21.
4. Maximum cfm limits are set to prevent moisture carryover on the evaporator coil.
5. Minimum cfm limits are set to ensure stable thermal expansion valve operation at low load conditions.
6. SCWB/SIWB/SCRB/SIRB 3, 5, 7.5, and 10 ton units are rated at ARI Standard 210/240-1994. SCWB/SIWB/SCRB/SIRB 15-ton units are rated at ARI Standard 340/360-2000.
7. SCRB/SIRB 3 and 5-ton units are rated as SEER.

General Data

Table GD-2. CCRA/CIRA Remote Air-Cooled Condenser General Data

Unit Size	3	5	7.5	10	15
Gross Heat Rejection (MBh)	59	102	116	207	232
Gross Heat Rejection (kW)	(17.3)	(29.9)	(34.0)	(60.7)	(68.0)
Condenser Fan Data					
Number/Type	1/Prop	1/Prop	2/Prop	2/Prop	4/Prop
Size (inches)	18″	22″	22″	22″	20″
Size (mm)	(457)	(559)	(559)	(559)	(508)
Fan Drive	Direct	Direct	Direct	Direct	Direct
No. of Motors/HP ea.	1/0.33	1/0.75	2/0.75	2/0.75	4/0.75
Nominal cfm					
Nominal (liters / sec)					
Condenser Coil Data					
Circuit 1 Size (in.)	36 x 48	36 x 48	72 x 96	36 x 48	36 x 48
Circuit 1 Size (mm)	(914 x 1219)	(914 x 1219)	(1828x 2438)	(914 x 1219)	(914 x 1219)
Circuit 2 No./Size (in.)	n/a	n/a	n/a	36 x 48	36 x 48
Circuit 2 No./Size (mm)				(914 x 1219)	(914 x 1219)
Face Area (sq. Ft.)	12.0	12.0	24.0	24.0	24.0
Face Area (sq.m)	(1.1)	(1.1)	(2.2)	(2.2)	(2.2)
Rows/fpf	2/144	3/144	3/144	3/144	3/144
Ambient Temp. Operating Range					
Standard Ambient (°F)	40 - 115	40 - 115	40 - 115	40 - 115	40 - 115
Standard Ambient (°C)	(4.4 - 46.1)	(4.4 - 46.1)	(4.4 - 46.1)	(4.4 - 46.1)	(4.4 - 46.1)
Low Ambient Option (°F)	0 - 115	0 - 115	0 - 115	0 - 115	0 - 115
Low Ambient Option (°C)	(-17.8 - 46.1)	(-17.8 - 46.1)	(-17.8 - 46.1)	(-17.8 - 46.1)	(-17.8 - 46.1)

Notes:
1. Gross heat rejection is at a 30°F (-1.1°C) ITD (initial temperature difference) between condensing temperature and ambient air entering condenser (includes the effect of subcooling).

Chart PD-1. Heating Coil Airside Pressure Drop

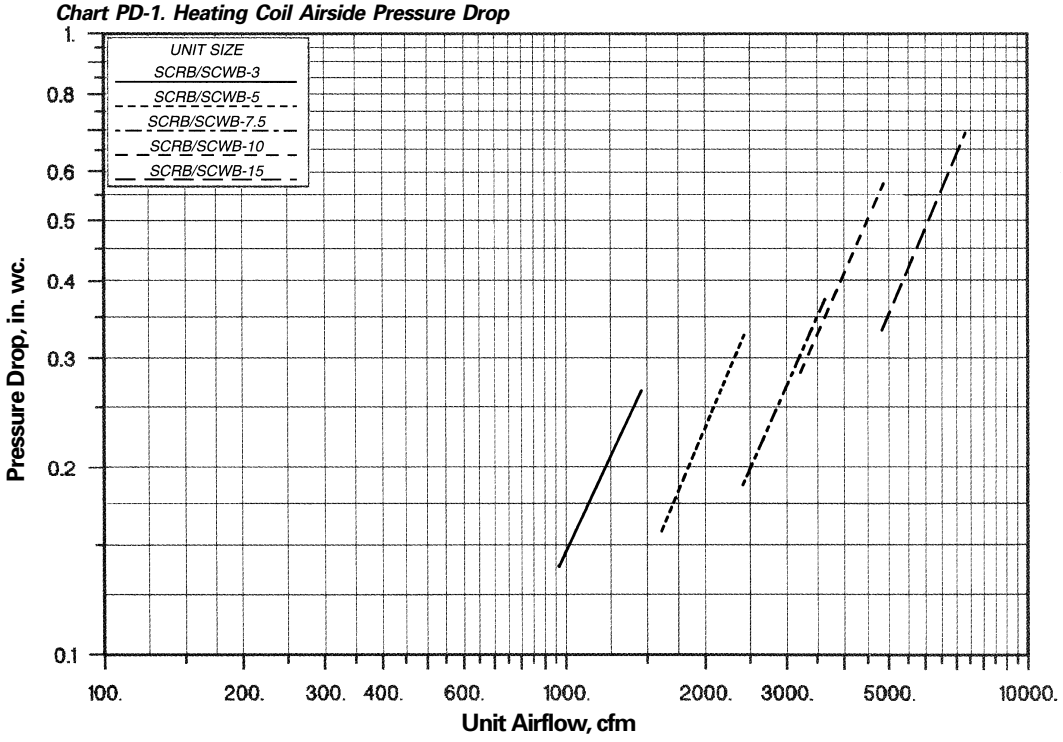
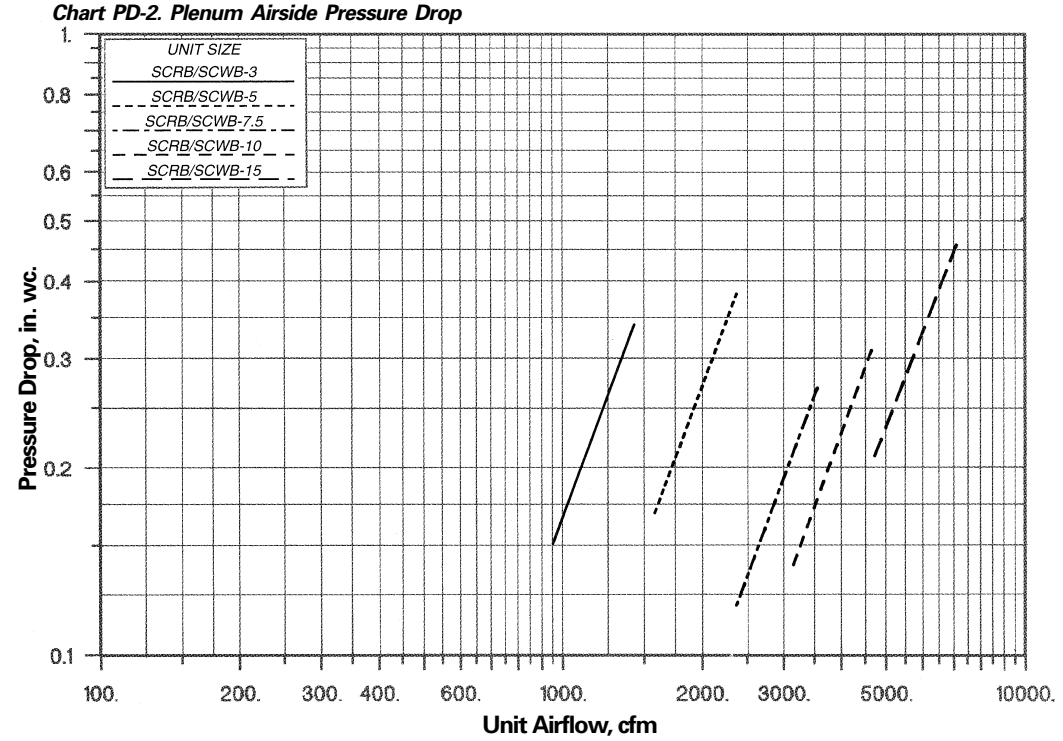


Chart PD-2. Plenum Airside Pressure Drop



Performance Data

Fan Data

Table PD-1. Fan Performance Data, 0.10 to 0.80 esp

Unit		External Static Pressure															
		0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80	
Size	cfm	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
3-Ton	960	616	0.14	682	0.17	750	0.21	816	0.25	880	0.30	940	0.35	993	0.40	1044	0.45
	1080	677	0.19	735	0.22	796	0.26	856	0.36	915	0.35	972	0.40	1027	0.46	1077	0.52
	1200	739	0.25	792	0.28	845	0.33	901	0.37	955	0.42	1007	0.47	1059	0.53	1110	0.59
	1320	802	0.32	852	0.35	898	0.40	949	0.45	999	0.50	1048	0.55	1196	0.61	1143	0.67
	1440	866	0.41	913	0.44	955	0.49	1000	0.54	1046	0.60	1092	0.65	1137	0.71		
5-Ton	1600	557	0.29	611	0.32	660	0.37	708	0.42	760	0.49	817	0.57	869	0.66	919	0.75
	1800	612	0.40	664	0.43	709	0.47	751	0.54	793	0.67	839	0.67	888	0.75	937	0.85
	2000	668	0.55	717	0.57	759	0.61	799	0.67	837	0.74	875	0.84	915	0.88	958	0.97
	2200	724	0.72	771	0.75	812	0.77	849	0.83	884	0.90	919	0.98	953	1.05	989	1.13
	2400	781	0.93	826	0.96	865	0.99	900	1.02	934	1.09	966	1.17	998	1.26	1029	1.34
7.5-Ton	2400	517	0.42	556	0.50	598	0.59	638	0.68	677	0.78	710	0.87	745	0.98	782	1.09
	2700	570	0.57	607	0.66	643	0.75	680	0.86	715	0.96	751	1.08	781	1.18	811	1.28
	3000	625	0.76	661	0.87	691	0.96	725	1.07	758	1.18	789	1.29	822	1.42		
	3300	681	1.00	715	1.11	742	1.21	771	1.31	803	1.44						
	3600	739	1.28	767	1.39	796	1.50										
10-Ton	3200	589	0.53	641	0.60	684	0.66	730	0.74	775	0.82	813	0.88	853	0.96	891	1.05
	3600	649	0.72	698	0.81	739	0.88	777	0.95	819	1.04	860	1.14	894	1.21	929	1.29
	4000	709	0.97	755	1.06	796	1.15	832	1.23	865	1.31	903	1.41	942	1.52	974	1.60
	4400	771	1.26	814	1.37	853	1.47	888	1.56	920	1.64	950	1.73	984	1.84	1020	1.97
	4800	833	1.61	874	1.74	911	1.85	945	1.95	976	2.05	1005	2.14	1033	2.24	1062	2.35
15-Ton	4800	521	0.92	554	0.97	589	1.08	624	1.17	656	1.28	689	1.39	721	1.50	752	1.60
	5400	578	1.29	608	1.34	637	1.43	669	1.56	700	1.66	729	1.77	758	1.90	787	2.02
	6000	636	1.76	663	1.80	689	1.87	717	2.00	745	2.14	773	2.26	799	2.38	825	2.51
	6600	694	2.34	719	2.38	743	2.43	767	2.53	792	2.68	819	2.84	844	2.98	868	3.10
	7200	752	3.03	776	3.07	798	3.12	820	3.20	842	3.32	866	3.49	890	3.67	913	3.82

Note:

Non-standard drive selection

Oversize motor required

Oversize motor required and non-standard drive selection

Use Tables PD-1 and PD-2 with these unit configurations:

3, 5, & 7.5-Ton Units

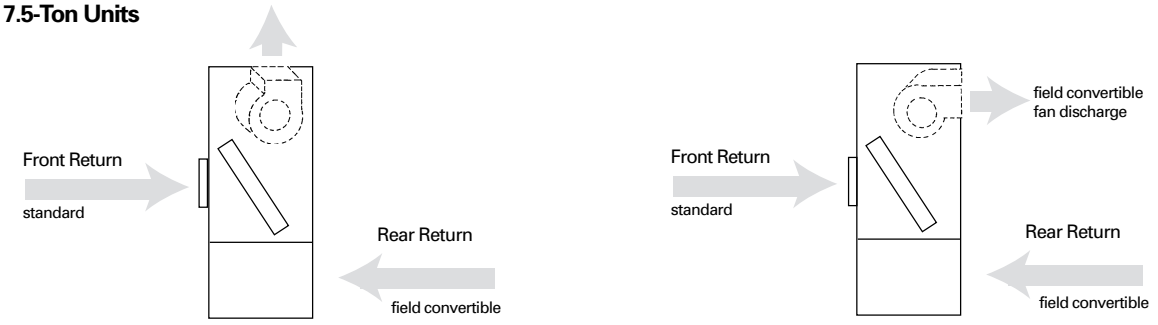


Table PD-2. Fan Performance Data, 0.90 to 2.50 esp

Unit		External Static Pressure																	
		0.90		1.00		1.10		1.25		1.50		1.75		2.00		2.25		2.50	
Size	cfm	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
3-Ton	960	1092	0.50	1138	0.55	1183	0.60	1248	0.69										
	1080	1124	0.57	1169	0.63	1212	0.68												
	1200	1158	0.66	1202	0.72														
	1320	1190	0.74																
	1440																		
5-Ton	1600	968	0.84	1017	0.94	1064	1.04	1134	1.19										
	1800	984	0.95	1029	1.05	1072	1.16	1137	1.31										
	2000	1003	1.07	1046	1.18	1088	1.29	1149	1.46										
	2200	1027	1.21	1067	1.32	1108	1.44												
	2400	1062	1.42																
7.5-Ton	2400	817	1.21	850	1.33	880	1.44												
	2700	843	1.41																
	3000																		
	3300																		
	3600																		
10-Ton	3200	928	1.14	967	1.23	1007	1.33	1063	1.48	1150	1.76	1234	2.11	1314	2.47	1391	2.86		
	3600	965	1.38	998	1.48	1031	1.58	1082	1.74	1170	2.01	1248	2.30	1324	2.66				
	4000	1005	1.68	1037	1.78	1069	1.89	1114	2.05	1189	2.33	1269	2.64	1342	2.94				
	4400	1052	2.07	1080	2.16	1108	2.25	1152	2.41	1222	2.71								
	4800	1096	2.48	1128	2.61	1156	2.72	1194	2.86										
15-Ton	4800	782	1.71	810	1.82	836	1.92	873	2.08	935	2.36	997	2.70	1062	3.09	1125	3.52	1186	3.98
	5400	815	2.14	843	2.26	869	2.39	907	2.57	964	2.86	1019	3.17	1074	3.51	1130	3.89	1187	4.34
	6000	851	2.66	877	2.78	903	2.92	940	3.12	998	3.46	1051	3.79	1101	4.13	1150	4.47	1199	4.86
	6600	892	3.24	916	3.39	939	3.55	974	3.77	1032	4.14	1085	4.51	1134	4.88				
	7200	936	3.95	945	4.10	979	4.25	1012	4.51	1065	4.92								

Note:

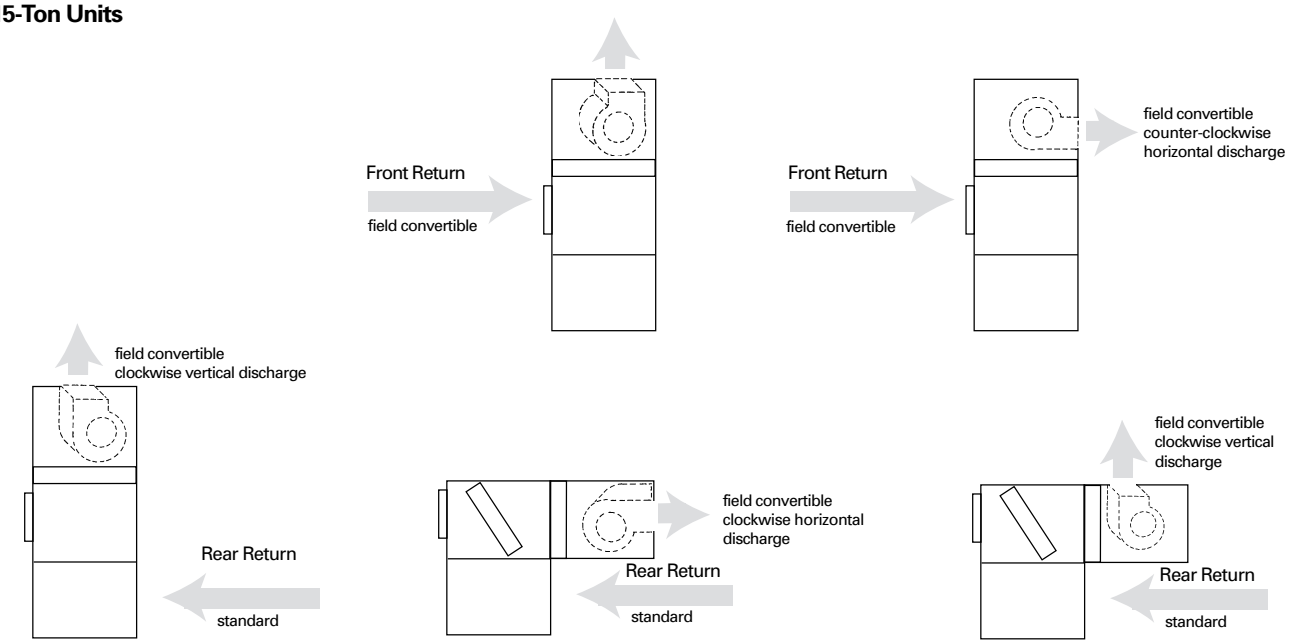
Non-standard drive selection

Oversize motor required

Oversize motor required and non-standard drive selection

Use Tables PD-1 and PD-2 with these unit configurations:

10 & 15-Ton Units



Performance Data

Fan Data

Table PD-3. Fan Performance Data, 0.10 to 0.80 esp

Unit		External Static Pressure															
		0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80	
Size	cfm	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
10-Ton	3200	460	0.45	520	0.49	572	0.56	623	0.63	670	0.70	716	0.78	762	0.86	805	0.95
	3600	501	0.62	558	0.67	608	0.73	653	0.80	698	0.89	741	0.97	782	1.05	823	1.14
	4000	544	0.84	597	0.89	644	0.95	698	1.03	728	1.11	768	1.20	808	1.29	845	1.38
	4400	586	1.10	637	1.16	682	1.22	724	1.29	763	1.38	799	1.47	836	1.57	872	1.67
	4800	632	1.41	679	1.48	721	1.54	761	1.61	799	1.70	834	1.79	867	1.89	900	2.00
15-Ton	4800	478	0.77	516	0.85	555	0.95	597	1.05	634	1.17	668	1.26	700	1.34	733	1.45
	5400	529	1.08	562	1.15	596	1.25	632	1.37	670	1.48	703	1.62	734	1.74	763	1.82
	6000	582	1.47	611	1.53	641	1.64	672	1.76	705	1.88	739	2.01	770	2.16	798	2.31
	6600	634	1.94	660	2.00	688	2.10	716	2.22	744	2.36	773	2.50	804	2.63	834	2.79
	7200	688	2.51	711	2.57	736	2.66	761	2.78	787	2.92	813	3.07	840	3.22	868	3.37

Note:

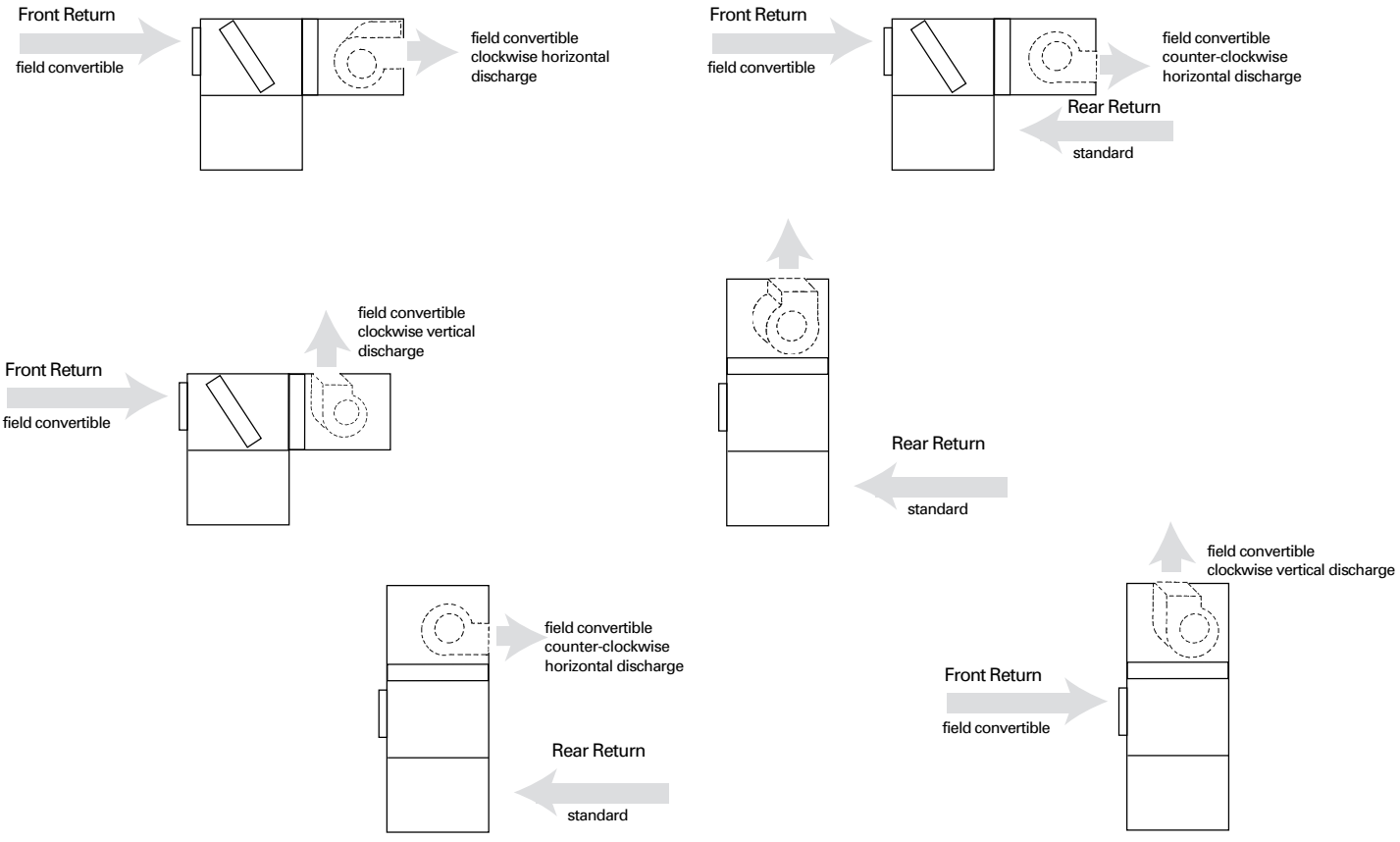
Non-standard drive selection

Oversize motor required

Oversize motor required and non-standard drive selection

Use Tables PD-3 and PD-4 with these unit configurations:

10 & 15-Ton Units



Performance Data

Fan Data

Table PD-4. Fan Performance Data, 0.90 to 2.50 esp

Unit		External Static Pressure																	
		0.90		1.00		1.10		1.25		1.50		1.75		2.00		2.25		2.50	
Size	cfm	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp	rpm	bhp
10-Ton	3200	846	1.03	887	1.13	925	1.24	980	1.40	1064	1.67	1141	1.95	1215	2.28	1287	2.59	1356	2.94
	3600	863	1.24	900	1.33	937	1.43	992	1.59	1077	1.89	1154	2.19	1225	2.50	1293	2.83		
	4000	882	1.48	918	1.58	955	1.69	1006	1.84	1088	2.13	1166	2.45	1238	2.78				
	4400	907	1.77	940	1.87	973	1.97	1024	2.15	1102	2.44	1178	2.74						
	4800	934	2.11	967	2.21	998	2.33	1044	2.50	1121	2.80								
15-Ton	4800	765	1.58	796	1.70	825	1.81	869	1.98	939	2.31	1007	2.70	1071	3.14	1132	3.60	1189	4.07
	5400	792	1.92	821	2.05	849	2.19	891	2.39	956	2.71	1020	3.05	1081	3.45	1141	3.91	1198	4.44
	6000	825	2.42	851	2.51	877	2.62	916	2.84	979	3.22	1039	3.57	1097	3.93	1153	4.84	1208	4.80
	6600	861	2.96	886	3.11	910	3.23	945	3.39	1008	3.75	1063	4.18	1118	4.57	1171	4.96		
	7200	896	3.53	922	3.72	946	3.90	980	4.12	1034	4.41	1088	4.80						

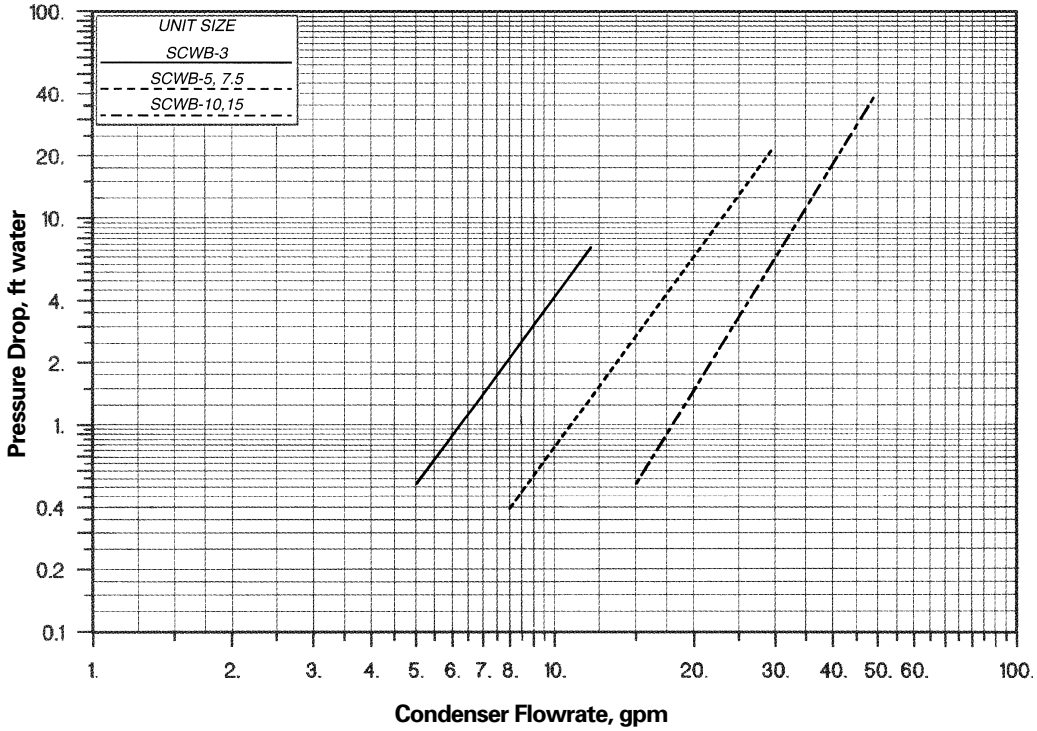
Note:

Non-standard drive selection

Oversize motor required

Oversize motor required and non-standard drive selection

Chart PD-3. Waterside Pressure Drop



Note: Chart PD-3 includes factory piping and condenser. If adding a water regulating valve, add valve WPD to the value in Chart PD-3. 10 and 15 ton units use two water regulating valves. Therefore, divide the gpm and WPD by 2 to determine values through each valve.

Table PD-5. Water Regulating Valve Pressure Drop, ft of water

gpm																				
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
4.6	6.0	6.9	8.1	9.9	12.0	16.6	18.4	21.0	23.1	28.9	34.6	36.9	40.4	43.4	46.2	53.1	56.6	61.9	64.0	69.3	76.2

Note: Table PD-5 is based on wide open water valve.

Performance Data

Table PD-6. Cfm Capacity Correction Table – Cooling

	Cfm Compared To Rated Quanitity	Cooling Capacity Multiplier	Sensible Capacity Multiplier
DX Cooling	-20%	0.96	0.95
	-10%	0.98	0.98
	Std	1.00	1.00
	+10%	1.02	1.02*
	+20%	1.03	1.05*

* If, after applying these multipliers, the SHR is greater than 1.0, use 1.0

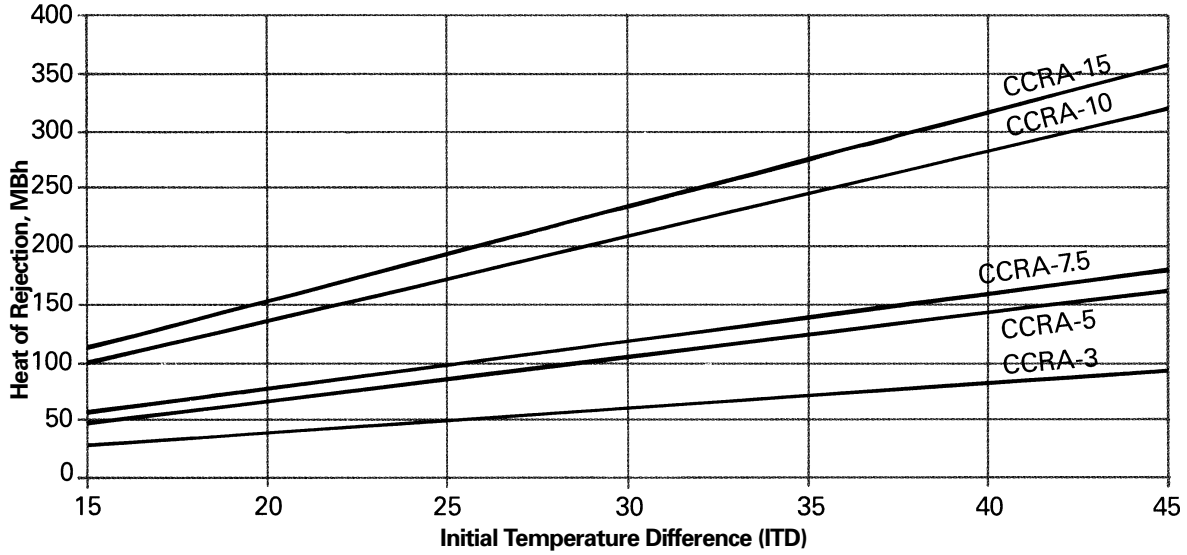
Table PD-7. Cfm Capacity Correction Table – Heating

	Cfm Compared To Rated Quanitity	Heating Capacity Multiplier
Hydronic Heating	-20%	0.89
	-10%	0.94
	Std	1.00
	+10%	1.06
	+20%	1.12

Table PD-8. Altitude Correction Factors

Altitude	2000	4000	6000	8000	10,000
Cooling Capacity Multiplier	0.98	0.95	0.92	0.89	0.86

Chart PD-4. CCRA/CIRA Gross Heat of Rejection



Performance Data

Water-Cooled 3 Ton

Table PD-9. SCWB/SIWB 3 Gross Cooling Capacity - 1200 cfm

			Entering Water Temperature																			
			65°F				75°F				85°F				95°F				100°F			
EDB F	EWB F	Flow gpm	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW
70	62	5	34	21	83.5	2.1	33	20	93.1	2.3	31	19	102.6	2.4	30	19	112.1	2.5	29	18	116.7	2.6
		6	35	21	79.0	2.0	33	20	88.7	2.2	32	20	98.3	2.3	30	19	107.9	2.5	29	18	112.6	2.5
		9	36	21	74.4	1.9	34	21	84.2	2.1	32	20	93.9	2.2	31	19	103.7	2.4	30	19	108.5	2.5
		12	36	22	72.0	1.8	34	21	81.9	2.0	33	20	91.7	2.2	31	19	101.5	2.4	30	19	106.4	2.4
	67	5	38	17	85.1	2.2	36	16	94.7	2.3	34	15	104.2	2.5	33	14	113.6	2.7	32	14	118.2	2.7
		6	38	17	80.2	2.0	37	16	89.9	2.2	35	15	99.5	2.4	33	15	109.1	2.6	32	14	113.8	2.7
		9	39	17	75.2	1.9	38	16	85.0	2.1	36	16	94.8	2.3	34	15	104.5	2.5	33	15	109.3	2.6
		12	39	17	72.7	1.9	38	17	82.5	2.1	36	16	92.3	2.3	34	15	102.2	2.4	33	15	106.9	2.5
75	62	5	34	25	83.5	2.1	33	24	93.1	2.2	31	23	102.6	2.4	30	23	112.0	2.5	29	22	116.7	2.6
		6	35	25	79.0	2.0	33	24	88.7	2.2	32	24	98.3	2.3	30	23	107.9	2.5	29	23	112.6	2.5
		9	36	26	74.3	1.9	34	25	84.2	2.1	32	24	93.9	2.2	31	23	103.7	2.4	30	23	108.5	2.5
		12	36	26	72.0	1.8	34	25	81.9	2.0	33	24	91.7	2.2	31	23	101.5	2.4	30	23	106.3	2.4
	67	5	38	21	85.1	2.2	36	20	94.7	2.3	34	19	104.2	2.5	33	18	113.6	2.7	32	18	118.2	2.7
		6	38	21	80.2	2.0	37	20	89.9	2.2	35	20	99.5	2.4	33	19	109.1	2.6	32	18	113.8	2.7
		9	39	21	75.2	1.9	37	21	85.0	2.1	36	20	94.8	2.3	34	19	104.5	2.5	33	19	109.2	2.6
		12	39	21	72.7	1.9	38	21	82.5	2.1	36	20	92.3	2.3	34	19	102.1	2.4	33	19	106.9	2.5
	72	5	41	16	86.8	2.3	40	16	96.4	2.4	38	15	105.8	2.6	36	14	115.2	2.8	35	14	119.8	2.9
		6	42	17	81.5	2.1	40	16	91.2	2.3	39	15	100.8	2.5	37	14	110.3	2.7	36	14	115.0	2.8
		9	43	17	76.1	2.0	41	16	85.9	2.2	39	16	95.6	2.4	37	15	105.3	2.6	37	14	110.1	2.7
		12	43	17	73.3	1.9	42	16	83.2	2.1	40	16	93.0	2.3	38	15	102.8	2.5	37	15	107.6	2.6
80	62	5	34	29	83.5	2.1	33	28	93.1	2.2	31	28	102.6	2.4	29	27	112.0	2.5	29	26	116.6	2.6
		6	35	29	78.9	2.0	33	29	88.6	2.2	32	28	98.3	2.3	30	27	107.9	2.5	29	27	112.6	2.5
		9	35	30	74.3	1.9	34	29	84.2	2.1	32	28	93.9	2.2	31	27	103.7	2.4	30	27	108.4	2.5
		12	36	30	72.0	1.8	34	29	81.9	2.0	33	28	91.7	2.2	31	27	101.5	2.3	30	27	106.3	2.4
	67	5	38	25	85.1	2.2	36	24	94.6	2.3	34	23	104.1	2.5	33	23	113.6	2.7	32	22	118.2	2.7
		6	38	25	80.2	2.0	37	24	89.8	2.2	35	24	99.5	2.4	33	23	109.1	2.6	32	22	113.8	2.7
		9	39	25	75.2	1.9	37	25	85.0	2.1	36	24	94.7	2.3	34	23	104.5	2.5	33	23	109.2	2.6
		12	39	26	72.7	1.9	38	25	82.5	2.1	36	24	92.3	2.3	34	23	102.1	2.4	33	23	106.9	2.5
	72	5	41	20	86.8	2.3	39	20	96.3	2.4	38	19	105.8	2.6	36	18	115.2	2.8	35	18	119.8	2.9
		6	42	21	81.5	2.1	40	20	91.2	2.3	39	19	100.8	2.5	37	19	110.3	2.7	36	18	115.0	2.8
		9	43	21	76.1	2.0	41	20	85.8	2.2	39	20	95.6	2.4	37	19	105.3	2.6	36	19	110.1	2.7
		12	43	21	73.3	1.9	42	21	83.2	2.1	40	20	93.0	2.3	38	19	102.8	2.5	37	19	107.6	2.6
85	62	5	34	33	83.5	2.1	33	32	93.1	2.3	31	31	102.7	2.4	30	30	112.3	2.5	29	29	117.0	2.6
		6	35	33	78.9	2.0	33	33	88.7	2.2	32	32	98.3	2.3	30	30	108.0	2.5	30	30	112.8	2.6
		9	35	34	74.3	1.9	34	33	84.2	2.1	32	32	93.9	2.2	31	31	103.7	2.4	30	30	108.6	2.5
		12	36	34	72.0	1.8	34	33	81.9	2.0	33	32	91.7	2.2	31	31	101.6	2.4	31	31	106.4	2.4
	67	5	38	29	85.1	2.2	36	28	94.9	2.3	34	27	104.1	2.5	32	27	113.6	2.7	32	26	118.2	2.7
		6	38	29	80.2	2.0	37	28	89.8	2.2	35	28	99.5	2.4	33	27	109.1	2.6	32	27	113.7	2.7
		9	39	29	75.2	1.9	37	29	85.0	2.1	36	28	94.7	2.3	34	27	104.5	2.5	33	27	109.2	2.6
		12	39	30	72.6	1.9	38	29	82.5	2.1	36	28	92.3	2.3	34	27	102.1	2.4	33	27	106.9	2.5
	72	5	41	24	86.8	2.3	39	24	96.3	2.4	38	23	105.8	2.6	36	22	115.2	2.8	35	22	119.8	2.9
		6	42	25	81.5	2.1	40	24	91.1	2.3	38	23	100.7	2.5	37	23	110.3	2.7	36	22	115.0	2.8
		9	43	25	76.1	2.0	41	24	85.8	2.2	39	24	95.6	2.4	37	23	105.3	2.6	36	23	110.1	2.7
		12	43	25	73.3	1.9	41	25	83.2	2.1	40	24	93.0	2.3	38	23	102.8	2.5	37	23	107.6	2.6

Notes: 1. All capacities shown are gross and have not considered indoor fan heat. 2. TOT = total gross cooling capacity. 3. SEN = sensible heat capacity.

Performance Data

Water-Cooled 5 Ton

Table PD-10. SCWB/SIWB 5 Gross Cooling Capacity - 2000 cfm

			Entering Water Temperature																			
			65°F				75°F				85°F				95°F				105°F			
EDB F	EWB F	Flow gpm	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW
70	62	8	63	38	85.3	3.8	60	37	95.0	4.2	58	36	104.6	4.5	55	35	114.2	4.9	52	33	123.7	5.2
		10	64	39	80.3	3.6	61	38	90.1	4.0	59	37	99.8	4.3	56	35	109.5	4.7	53	34	119.2	5.0
		15	65	40	75.3	3.4	63	38	85.1	3.8	60	37	94.9	4.1	57	36	104.8	4.5	55	35	114.5	4.8
		20	65	40	72.7	3.3	63	39	82.6	3.7	61	37	92.5	4.0	58	36	102.3	4.4	55	35	112.2	4.7
	67	8	68	30	86.9	4.0	66	29	96.6	4.3	63	28	106.2	4.7	60	26	115.7	5.1	57	25	125.2	5.4
		10	70	30	81.6	3.7	67	29	91.3	4.1	64	28	101.0	4.5	61	27	110.7	4.8	58	26	120.3	5.2
		15	71	31	76.1	3.5	68	30	85.9	3.9	66	29	95.8	4.3	63	28	105.5	4.6	60	26	115.3	5.0
		20	-	-	-	-	69	30	83.2	3.7	66	29	93.1	4.1	64	28	102.9	4.5	60	27	112.8	4.9
75	62	8	63	46	85.3	3.8	60	45	95.0	4.2	58	44	104.6	4.5	55	43	114.2	4.9	52	42	123.7	5.2
		10	64	47	80.3	3.6	61	46	90.1	4.0	59	45	99.8	4.3	56	43	109.5	4.7	53	42	119.2	5.0
		15	65	48	75.3	3.4	63	46	85.1	3.8	60	45	94.9	4.1	57	44	104.7	4.5	55	43	114.5	4.8
		20	65	48	72.7	3.3	63	47	82.6	3.7	61	46	92.5	4.0	58	44	102.3	4.4	55	43	112.2	4.7
	67	8	68	38	86.9	4.0	66	37	96.6	4.3	63	36	106.2	4.7	60	34	115.7	5.1	57	33	125.2	5.4
		10	70	38	81.5	3.7	67	37	91.3	4.1	64	36	101.0	4.5	61	35	110.7	4.8	58	34	120.3	5.2
		15	71	39	76.1	3.5	68	38	85.9	3.9	66	37	95.7	4.3	63	36	105.5	4.6	60	34	115.3	5.0
		20	-	-	-	-	69	38	83.2	3.7	66	37	93.1	4.1	63	36	102.9	4.5	60	35	112.8	4.9
	72	8	74	29	88.6	4.1	71	28	98.2	4.5	68	27	107.8	4.9	65	26	117.3	5.3	-	-	-	-
		10	76	30	82.8	3.8	73	29	92.6	4.2	70	28	102.2	4.6	67	26	111.9	5.0	63	25	121.5	5.4
		15	-	-	-	-	74	29	86.8	4.0	72	28	96.6	4.4	68	27	106.4	4.8	65	26	116.1	5.2
		20	-	-	-	-	75	30	83.9	3.8	72	29	93.7	4.2	69	27	103.6	4.6	66	26	113.4	5.1
80	62	8	63	55	85.3	3.8	60	53	95.0	4.2	58	52	104.6	4.5	55	51	114.2	4.8	52	50	123.7	5.2
		10	64	55	80.3	3.6	61	54	90.1	4.0	59	53	99.8	4.3	56	51	109.5	4.7	53	50	119.2	5.0
		15	65	56	75.2	3.4	62	54	85.1	3.8	60	53	94.9	4.1	57	52	104.7	4.5	55	51	114.5	4.8
		20	65	56	72.7	3.3	63	55	82.6	3.7	61	54	92.5	4.0	58	52	102.3	4.4	55	51	112.2	4.7
	67	8	68	46	86.9	4.0	66	45	96.6	4.3	63	44	106.1	4.7	60	42	115.7	5.1	57	41	125.1	5.4
		10	69	46	81.5	3.7	67	45	91.3	4.1	64	44	101.0	4.5	61	43	110.7	4.8	58	42	120.3	5.2
		15	71	47	76.1	3.5	68	46	85.9	3.9	66	45	95.7	4.3	63	44	105.5	4.6	60	42	115.3	5.0
		20	-	-	-	-	69	46	83.2	3.7	66	45	93.1	4.1	63	44	102.9	4.5	60	43	112.7	4.9
	72	8	74	37	88.6	4.1	71	36	98.2	4.5	68	35	107.7	4.9	65	34	117.2	5.3	-	-	-	-
		10	76	38	82.8	3.8	73	37	92.5	4.2	70	36	102.2	4.6	67	34	111.9	5.0	63	33	121.5	5.4
		15	-	-	-	-	74	37	86.8	4.0	71	36	96.6	4.4	68	35	106.3	4.8	65	34	116.1	5.2
		20	-	-	-	-	75	38	83.9	3.8	72	37	93.7	4.2	69	35	103.5	4.6	66	34	113.4	5.1
85	62	8	63	62	85.4	3.9	61	61	95.1	4.2	58	58	104.8	4.6	56	56	114.6	4.9	54	54	124.3	5.3
		10	64	63	80.3	3.6	62	61	90.1	4.0	59	59	99.9	4.3	57	57	109.7	4.7	55	55	119.5	5.1
		15	65	63	75.3	3.4	63	62	85.1	3.8	60	60	95.0	4.1	58	58	104.9	4.5	56	56	114.7	4.9
		20	65	64	72.7	3.3	63	62	82.6	3.7	61	61	92.5	4.0	59	59	102.4	4.4	56	56	112.3	4.8
	67	8	68	54	86.9	4.0	65	53	96.5	4.3	63	52	106.1	4.7	60	50	115.7	5.1	57	49	125.1	5.4
		10	69	54	81.5	3.7	67	53	91.3	4.1	64	52	101.0	4.5	61	51	110.6	4.8	58	50	120.3	5.2
		15	71	55	76.1	3.5	68	54	85.9	3.9	66	53	95.7	4.3	63	52	105.5	4.6	60	50	115.3	5.0
		20	-	-	-	-	69	54	83.2	3.7	66	53	93.1	4.1	63	52	102.9	4.5	60	51	112.7	4.9
	72	8	74	45	88.6	4.1	71	44	98.2	4.5	68	43	107.7	4.9	65	42	117.2	5.3	-	-	-	
		10	75	46	82.8	3.8	73	45	92.5	4.2	70	44	102.2	4.6	67	42	111.8	5.0	63	41	121.4	5.4
		15	-	-	-	-	74	45	86.8	4.0	71	44	96.6	4.4	68	43	106.3	4.8	65	42	116.1	5.2
		20	-	-	-	-	75	46	83.8	3.8	72	44	93.7	4.2	69	43	103.5	4.6	66	42	113.4	5.0

Notes: 1. All capacities shown are gross and have not considered indoor fan heat. 2. TOT = total gross cooling capacity. 3. SEN = sensible heat capacity.

Performance Data

Water-Cooled 7.5 Ton

Table PD-11. SCWB/SIWB 7.5 Gross Cooling Capacity - 3000 cfm

			Entering Water Temperature																			
			65°F				75°F				85°F				95°F				105°F			
EDB F	EWB F	Flow gpm	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW
70	62	11	97	59	86.8	6.6	92	57	96.3	7.0	88	54	105.7	7.5	83	52	115.1	7.9	78	50	124.4	8.3
		15	99	60	81.1	6.2	94	58	90.7	6.7	90	55	100.3	7.2	85	53	109.9	7.7	80	51	119.4	8.1
		23	101	61	75.8	5.9	96	59	85.6	6.4	92	56	95.3	7.0	87	54	105.0	7.4	82	52	114.7	7.9
		30	102	61	73.1	5.7	97	59	82.9	6.3	92	57	92.8	6.8	88	54	102.5	7.3	82	52	112.3	7.8
	67	11	106	46	88.6	6.9	101	44	98.0	7.4	96	42	107.4	7.9	91	40	116.8	8.3	85	38	126.1	8.8
		15	108	47	82.5	6.5	103	45	92.1	7.0	98	43	101.6	7.6	93	41	111.2	8.1	88	39	120.7	8.5
		23	-	-	-	-	106	46	86.5	6.7	100	44	96.2	7.3	95	42	105.9	7.8	90	39	115.6	8.3
		30	-	-	-	-	107	47	83.6	6.5	102	44	93.4	7.1	96	42	103.2	7.6	91	40	113.0	8.2
75	62	11	97	71	86.8	6.5	92	68	96.2	7.0	88	66	105.7	7.5	83	64	115.0	7.9	78	62	124.4	8.3
		15	99	72	81.1	6.2	94	69	90.7	6.7	90	67	100.3	7.2	85	65	109.9	7.7	80	63	119.4	8.1
		23	101	73	75.8	5.9	96	70	85.6	6.4	91	68	95.3	7.0	87	66	105.0	7.4	81	63	114.7	7.9
		30	102	73	73.1	5.7	97	71	82.9	6.3	92	69	92.8	6.8	87	66	102.5	7.3	82	64	112.3	7.8
	67	11	106	58	88.6	6.9	101	56	98.0	7.4	96	54	107.4	7.9	91	52	116.8	8.3	85	49	126.1	8.8
		15	108	59	82.4	6.5	103	57	92.1	7.0	98	55	101.6	7.6	93	53	111.2	8.1	88	50	120.6	8.5
		23	-	-	-	-	105	58	86.5	6.7	100	56	96.2	7.3	95	54	105.9	7.8	90	51	115.5	8.3
		30	-	-	-	-	106	58	83.6	6.5	101	56	93.4	7.1	96	54	103.2	7.6	91	52	113.0	8.2
	72	11	115	45	90.5	7.2	110	43	99.9	7.7	104	41	109.3	8.3	99	39	118.6	8.8	-	-	-	-
		15	118	46	83.9	6.7	113	44	93.5	7.3	107	42	103.0	7.9	102	40	112.5	8.4	96	38	112.0	9.0
		23	-	-	-	-	115	45	87.4	6.9	110	43	97.1	7.5	104	41	106.8	8.1	98	39	116.5	8.7
		30	-	-	-	-	-	-	-	-	111	44	94.1	7.3	105	42	103.9	7.9	100	39	113.6	8.5
80	62	11	97	83	86.8	6.5	92	80	96.2	7.0	87	78	105.6	7.5	83	76	115.0	7.9	78	73	124.4	8.3
		15	99	84	81.1	6.2	94	81	90.7	6.7	90	79	100.3	7.2	85	77	109.9	7.7	80	74	119.4	8.1
		23	101	84	75.8	5.9	96	82	85.6	6.4	91	80	95.3	7.0	86	78	105.0	7.4	81	75	114.7	7.9
		30	102	85	73.1	5.7	97	83	82.9	6.3	92	80	92.7	6.8	87	78	102.5	7.3	82	76	112.3	7.8
	67	11	106	70	88.6	6.8	101	68	98.0	7.4	96	66	107.4	7.9	91	63	116.7	8.3	85	61	126.0	8.8
		15	108	71	82.4	6.5	103	69	92.0	7.0	98	67	101.6	7.6	93	64	111.1	8.1	88	62	120.6	8.5
		23	-	-	-	-	105	70	86.4	6.7	100	68	96.2	7.3	95	65	105.9	7.8	90	63	115.5	8.3
		30	-	-	-	-	106	70	83.6	6.5	101	68	93.4	7.1	96	66	103.2	7.6	91	64	112.9	8.2
	72	11	115	57	90.5	7.2	110	55	99.9	7.7	104	53	109.2	8.3	99	51	118.6	8.8	-	-	-	-
		15	118	58	83.9	6.7	113	56	93.4	7.3	107	54	103.0	7.9	102	52	112.5	8.4	96	50	112.0	9.0
		23	-	-	-	-	115	57	87.4	6.9	110	55	97.1	7.5	104	53	106.8	8.1	98	51	116.4	8.7
		30	-	-	-	-	-	-	-	-	111	56	94.1	7.3	105	53	103.9	7.9	100	51	113.6	8.5
85	62	11	97	94	86.8	6.5	93	92	96.3	7.0	88	88	105.8	7.5	84	84	115.4	8.0	80	80	125.0	8.5
		15	99	95	81.1	6.2	95	93	90.8	6.7	90	90	100.4	7.2	86	86	110.1	7.7	82	82	119.8	8.2
		23	101	96	75.8	5.9	96	94	85.6	6.4	92	91	95.3	7.0	87	87	105.1	7.5	83	83	114.9	8.0
		30	102	97	73.1	5.7	97	94	82.9	6.3	93	92	92.8	6.8	88	88	102.6	7.3	84	84	112.4	7.9
	67	11	105	82	88.5	6.8	101	80	98.0	7.4	96	77	107.4	7.9	90	75	116.7	8.3	85	73	126.0	8.8
		15	108	83	82.4	6.5	103	81	92.0	7.0	98	78	101.6	7.6	93	76	111.1	8.1	87	74	120.6	8.5
		23	-	-	-	-	105	82	86.4	6.7	100	79	96.2	7.2	95	77	105.9	7.8	90	75	115.5	8.3
		30	-	-	-	-	106	82	83.6	6.5	101	80	93.4	7.1	96	78	103.2	7.6	91	75	112.9	8.1
	72	11	115	69	90.4	7.2	110	67	99.9	7.7	104	65	109.2	8.3	99	63	118.5	8.8	-	-	-	-
		15	118	70	83.8	6.7	112	68	93.4	7.3	107	66	103.0	7.9	102	64	112.5	8.4	96	62	121.9	9.0
		23	-	-	-	-	115	69	87.4	6.9	110	67	97.1	7.5	104	65	106.8	8.1	98	62	116.4	8.7
		30	-	-	-	-	-	-	-	-	111	67	94.1	7.3	105	65	103.9	7.9	99	63	113.6	8.5

Notes: 1. All capacities shown are gross and have not considered indoor fan heat. 2. TOT = total gross cooling capacity. 3. SEN = sensible heat capacity.

Table PD-12. SCWB/SIWB 10 Gross Cooling Capacity - 4000 cfm

			Entering Water Temperature																			
			65°F				75°F				85°F				95°F				105°F			
EDB F	EWB F	Flow gpm	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW
70	62	15	121	75	84.8	7.8	116	72	94.5	8.5	111	70	104.1	9.2	106	68	113.7	9.8	100	65	123.2	10.5
		20	124	76	80.0	7.4	119	74	89.7	8.1	114	71	99.5	8.8	109	69	109.2	9.4	103	66	118.8	10.1
		30	126	77	75.1	6.9	122	75	84.9	7.6	117	73	94.8	8.4	112	70	104.6	9.1	106	68	114.3	9.8
		40	128	78	72.6	6.6	123	76	82.5	7.4	118	73	92.3	8.1	113	71	102.2	8.9	107	68	112.0	9.6
	67	15	132	58	86.3	8.1	126	55	96.0	8.8	121	53	105.6	9.5	115	51	115.1	10.2	109	48	124.6	11.0
		20	135	59	81.1	7.6	130	57	90.9	8.3	124	54	100.6	9.1	118	52	110.3	9.8	112	50	119.9	10.5
		30	138	60	75.8	7.0	133	58	85.7	7.8	128	56	95.5	8.6	122	53	105.3	9.3	116	51	115.1	10.1
		40	139	61	73.2	6.7	135	59	83.1	7.5	129	57	92.9	8.3	124	54	102.8	9.1	118	52	112.6	9.9
75	62	15	121	91	84.8	7.8	116	88	94.5	8.5	111	86	104.1	9.2	106	84	113.7	9.8	100	81	123.2	10.5
		20	124	92	80.0	7.4	119	90	89.7	8.1	114	87	99.5	8.8	109	85	109.2	9.4	103	82	118.8	10.1
		30	126	93	75.0	6.9	122	91	84.9	7.6	117	89	94.7	8.3	111	86	104.5	9.1	106	84	114.3	9.8
		40	128	94	72.6	6.6	123	92	82.5	7.4	118	89	92.3	8.1	113	87	102.2	8.9	107	84	112.0	9.6
	67	15	131	74	86.3	8.1	126	71	96.0	8.8	121	69	105.6	9.5	115	67	115.1	10.2	109	64	124.6	10.9
		20	135	75	81.1	7.6	130	73	90.9	8.3	124	70	100.6	9.1	118	68	110.3	9.8	112	65	119.9	10.5
		30	138	76	75.8	7.0	133	74	85.7	7.8	127	72	95.5	8.6	122	69	105.3	9.3	116	67	115.1	10.1
		40	139	77	73.2	6.7	134	75	83.1	7.5	129	73	92.9	8.3	123	70	102.8	9.1	117	68	112.6	9.9
	72	15	142	56	87.9	8.4	137	54	97.5	9.1	131	52	107.1	9.9	125	49	116.6	10.7	-	-	-	-
		20	146	58	82.4	7.8	141	56	92.1	8.6	135	53	101.8	9.4	129	51	111.4	10.1	122	48	121.0	11.0
		30	150	59	76.7	7.2	144	57	86.5	8.0	139	55	96.3	8.8	133	52	106.1	9.6	126	50	115.8	10.4
		40	152	60	73.8	6.8	146	58	83.7	7.7	141	56	93.5	8.5	135	53	103.4	9.3	128	51	113.2	10.2
80	62	15	121	107	84.8	7.8	116	104	94.4	8.5	111	102	104.1	9.2	106	99	113.7	9.8	100	97	123.2	10.5
		20	124	108	79.9	7.4	119	106	89.7	8.1	114	103	99.5	8.8	108	101	109.2	9.4	103	98	118.8	10.1
		30	126	109	75.0	6.9	122	107	84.9	7.6	117	105	94.7	8.3	111	102	104.5	9.1	106	99	114.3	9.8
		40	128	110	72.6	6.6	123	108	82.4	7.4	118	105	92.3	8.1	113	103	102.2	8.8	107	100	112.0	9.6
	67	15	131	89	86.3	8.1	126	87	95.9	8.8	121	85	105.5	9.5	115	82	115.1	10.2	109	80	124.6	10.9
		20	134	91	81.1	7.6	129	89	90.9	8.3	124	86	100.6	9.1	118	84	110.3	9.8	112	81	119.9	10.5
		30	138	92	75.8	7.0	133	90	85.7	7.8	127	88	95.5	8.6	122	85	105.3	9.3	116	83	115.1	10.1
		40	139	93	73.2	6.7	134	91	83.0	7.5	129	88	92.9	8.3	123	86	102.8	9.1	117	83	112.6	9.9
	72	15	142	72	87.9	8.3	137	70	97.5	9.1	131	68	107.1	9.9	125	65	116.6	10.6	-	-	-	-
		20	146	73	82.3	7.8	141	71	92.1	8.6	135	69	101.8	9.4	129	67	111.4	10.1	122	64	121.0	10.9
		30	150	75	76.7	7.2	144	73	86.5	8.0	139	71	96.3	8.8	132	68	106.1	9.6	126	66	115.8	10.4
		40	151	76	73.8	6.8	146	74	83.7	7.7	141	71	93.5	8.5	134	69	103.4	9.3	128	67	113.2	10.2
85	62	15	121	121	84.9	7.8	117	117	94.6	8.5	113	113	104.4	9.2	109	109	114.1	9.9	104	104	123.8	10.7
		20	124	123	80.0	7.4	120	120	89.8	8.1	116	116	99.6	8.8	111	111	109.5	9.5	106	106	119.2	10.3
		30	127	125	75.1	6.9	122	122	84.9	7.6	118	118	94.8	8.4	114	114	104.7	9.1	109	109	114.6	9.9
		40	128	125	72.6	6.6	124	123	82.5	7.4	119	119	92.4	8.1	115	115	102.3	8.9	110	110	112.2	9.6
	67	15	131	105	86.3	8.1	126	103	95.9	8.8	121	101	105.5	9.5	115	98	115.1	10.2	108	96	124.6	10.9
		20	134	107	81.7	7.6	129	104	90.9	8.3	124	102	100.6	9.1	118	100	110.2	9.8	112	97	119.9	10.5
		30	137	108	75.8	7.0	133	106	85.7	7.8	127	103	95.5	8.6	122	101	105.3	9.3	115	98	115.1	10.1
		40	139	109	73.1	6.7	134	106	83.0	7.5	129	104	92.9	8.3	123	102	102.8	9.1	117	99	112.6	9.9
	72	15	142	88	87.9	8.3	137	86	97.5	9.1	131	83	107.1	9.9	124	81	116.6	10.6	-	-	-	-
		20	146	89	82.3	7.8	140	87	92.1	8.6	135	85	101.8	9.4	128	83	111.4	10.1	122	80	121.0	10.9
		30	149	91	76.7	7.2	144	89	86.5	8.0	138	86	96.3	8.8	132	84	106.1	9.6	126	82	115.8	10.4
		40	151	91	73.8	6.8	146	89	83.7	7.7	140	87	93.5	8.5	134	85	103.4	9.3	128	82	113.2	10.2

Notes: 1. All capacities shown are gross and have not considered indoor fan heat. 2. TOT = total gross cooling capacity. 3. SEN = sensible heat capacity.

Performance Data

Water-Cooled 15 Ton

Table PD-13. SCWB/SIWB 15 Gross Cooling Capacity - 6000 cfm

			Entering Water Temperature																			
			65°F				75°F				85°F				95°F				105°F			
EDB F	EWB F	Flow gpm	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW	Tot MBh	Sen MBh	LWT F	kW
70	62	23	202	126	87.0	13.1	192	122	96.5	14.1	182	117	105.9	15.0	172	113	115.2	15.9	161	108	124.5	16.7
		30	206	128	81.7	12.4	196	124	91.3	13.5	186	119	100.8	14.5	176	114	110.3	15.4	165	110	119.8	16.3
		45	210	130	76.2	11.7	200	125	85.9	12.9	190	121	95.6	13.9	180	116	105.3	14.9	169	111	115.0	15.8
		50	211	130	75.1	11.6	201	126	84.8	12.7	191	121	94.6	13.8	181	116	104.3	14.8	170	112	114.0	15.8
	67	23	220	96	88.9	13.7	210	92	98.3	14.7	199	88	107.6	15.8	188	83	116.9	16.7	177	79	126.2	17.6
		30	225	99	83.1	12.9	215	94	92.6	14.1	204	90	102.1	15.1	193	85	111.6	16.2	182	81	121.1	17.1
		45	230	101	77.1	12.1	219	96	86.8	13.3	209	92	96.5	14.5	197	87	106.2	15.6	186	82	115.8	16.6
		50	231	101	75.9	12.0	220	96	85.7	13.2	210	92	95.4	14.3	198	87	105.1	15.4	187	83	114.8	16.5
75	62	23	202	154	87.0	13.1	192	150	96.5	14.1	182	145	105.9	15.0	172	141	115.2	15.8	161	136	124.5	16.7
		30	206	156	81.7	12.4	196	152	91.2	13.5	186	147	100.8	14.5	176	142	110.3	15.4	165	138	119.8	16.3
		45	210	158	76.2	11.7	200	154	85.9	12.9	190	149	95.6	13.9	180	144	105.3	14.9	169	139	115.0	15.8
		50	211	159	75.1	11.6	201	154	84.8	12.7	191	149	94.6	13.8	180	144	104.3	14.8	170	140	114.0	15.8
	67	23	220	125	88.8	13.7	210	120	98.2	14.7	199	116	107.6	15.7	188	111	116.9	16.7	177	107	126.2	17.6
		30	225	127	83.0	12.9	215	122	92.6	14.1	204	118	102.1	15.1	193	113	111.6	16.1	181	109	121.1	17.1
		45	230	129	77.1	12.1	219	124	86.8	13.3	208	120	96.5	14.5	197	115	106.2	15.6	186	110	115.8	16.6
		50	231	129	75.9	12.0	220	125	85.7	13.2	209	120	95.4	14.3	198	115	105.1	15.4	187	111	114.8	16.5
	72	23	239	94	90.8	14.3	228	90	100.1	15.4	217	86	109.4	16.5	205	82	118.7	17.5	–	–	–	–
		30	245	97	84.5	13.5	234	92	94.0	14.7	222	88	103.5	15.8	211	84	113.0	16.9	199	79	122.4	18.0
		45	250	99	78.1	12.5	239	94	87.8	13.8	228	90	97.5	15.0	216	86	107.1	16.2	204	81	116.8	17.3
		50	252	99	76.8	12.3	240	95	86.5	13.6	229	91	96.3	14.9	217	86	105.9	16.1	205	82	115.6	17.2
80	62	23	202	182	87.0	13.1	192	178	96.5	14.1	183	173	105.9	15.0	173	169	115.3	15.9	162	162	124.6	16.7
		30	206	184	81.6	12.4	196	180	91.2	13.5	186	175	100.8	14.5	176	170	110.4	15.4	166	165	119.9	16.3
		45	210	186	76.2	11.7	200	182	85.9	12.9	190	177	95.6	13.9	180	172	105.3	14.9	170	167	115.0	15.9
		50	211	187	75.1	11.6	201	182	84.8	12.7	191	177	94.6	13.8	181	173	104.3	14.8	171	168	114.0	15.8
	67	23	220	153	88.8	13.7	210	148	98.2	14.7	199	144	107.6	15.7	188	139	116.9	16.7	177	135	126.2	17.6
		30	225	155	83.0	12.9	214	150	92.6	14.1	204	146	102.1	15.1	193	141	111.6	16.1	181	136	121.1	17.1
		45	229	157	77.1	12.1	219	152	86.8	13.3	208	148	96.5	14.5	197	143	106.2	15.6	186	138	115.8	16.6
		50	230	157	75.9	11.9	220	153	85.7	13.2	209	148	95.4	14.3	198	143	105.1	15.4	187	139	114.8	16.5
	72	23	239	122	90.7	14.3	228	118	100.1	15.4	217	114	109.4	16.5	205	110	118.7	17.5	–	–	–	–
		30	245	125	84.5	13.5	234	120	94.0	14.7	222	116	103.5	15.8	210	112	113.0	16.9	198	107	122.4	17.9
		45	250	127	78.1	12.5	239	122	87.8	13.8	228	118	97.5	15.0	216	114	107.1	16.2	204	109	116.7	17.3
		50	251	127	76.8	12.3	240	123	86.5	13.6	229	118	96.2	14.9	217	114	105.9	16.1	205	109	115.6	17.2
85	62	23	205	205	87.3	13.2	197	197	96.9	14.2	189	189	106.5	15.3	180	180	116.1	16.3	171	171	125.6	17.3
		30	208	208	81.8	12.5	200	200	91.5	13.6	192	192	101.2	14.7	183	183	110.9	15.7	175	175	120.6	16.8
		45	211	211	76.2	11.8	203	203	86.1	12.9	195	195	95.9	14.1	187	187	105.7	15.2	178	178	115.4	16.2
		50	212	212	75.1	11.6	204	204	85.0	12.8	196	196	94.8	13.9	187	187	104.6	15.1	179	179	114.4	16.1
	67	23	220	180	88.8	13.7	209	176	98.2	14.7	199	172	107.6	15.7	188	167	116.9	16.7	–	–	–	–
		30	224	182	83.0	12.9	214	178	92.6	14.1	203	173	102.1	15.1	192	169	111.6	16.1	210	210	123.3	18.5
		45	229	185	77.1	12.1	219	180	86.8	13.3	208	175	96.5	14.5	197	171	106.2	15.6	215	215	117.3	17.8
		50	230	185	75.9	11.9	220	180	85.6	13.2	209	176	95.4	14.3	198	171	105.1	15.4	216	216	116.1	17.6
	72	23	239	150	90.7	14.3	228	146	100.1	15.4	217	142	109.4	16.5	205	137	118.7	17.5	–	–	–	–
		30	244	152	84.5	13.4	233	148	94.0	14.6	222	144	103.5	15.8	210	139	113.0	16.9	198	135	122.4	17.9
		45	250	154	78.1	12.5	239	150	87.8	13.8	227	146	97.5	15.0	216	141	107.1	16.2	203	137	116.7	17.3
		50	251	155	76.8	12.3	240	151	86.5	13.6	228	146	96.2	14.9	217	142	105.9	16.1	204	137	115.6	17.2

Notes: 1. All capacities shown are gross and have not considered indoor fan heat. 2. TOT = total gross cooling capacity. 3. SEN = sensible heat capacity.

Table PD-14. SCRB/SIRB 3 Gross Cooling Capacity

			Entering Ambient Air Temperature									
			75°F		85°F		95°F		105°F		115°F	
Airflow cfm	EDB F	EWB F	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh
960	70	62	33	20	35	15	28	17	-	-	-	-
		67	37	16	30	18	31	14	-	-	-	-
		72	32	19	33	14	-	-	-	-	-	-
	75	62	33	23	32	23	30	22	28	21	26	20
		67	37	20	35	19	33	18	31	17	29	16
		72	40	16	38	15	36	14	34	14	32	13
	80	62	33	27	31	26	30	25	28	24	26	23
		67	36	23	35	22	33	22	31	21	29	20
		72	40	20	38	19	36	18	34	17	32	16
	85	62	33	30	31	30	30	29	28	28	26	26
		67	36	27	35	26	33	25	31	24	29	24
		72	40	23	38	22	36	22	34	21	32	20
1200	70	62	35	21	36	16	29	19	-	-	-	-
		67	38	17	31	19	32	14	-	-	-	-
		72	33	20	34	15	-	-	-	-	-	-
	75	62	35	25	33	24	31	24	29	23	27	22
		67	38	21	36	20	34	19	32	18	30	18
		72	42	17	40	16	38	15	36	14	33	13
	80	62	35	30	33	29	31	28	29	27	27	26
		67	38	25	36	24	34	24	32	23	30	22
		72	42	21	40	20	38	19	36	18	33	18
	85	62	35	34	33	33	31	31	30	30	28	28
		67	38	29	36	29	34	28	32	27	30	26
		72	42	25	40	24	38	23	36	23	33	22
1440	70	62	36	22	37	16	30	20	-	-	-	-
		67	39	17	32	21	33	15	-	-	-	-
		72	34	21	35	16	-	-	-	-	-	-
	75	62	36	27	34	26	32	25	30	24	28	24
		67	39	22	37	21	35	20	33	20	31	19
		72	43	17	41	16	39	15	37	15	34	14
	80	62	36	32	34	31	32	30	30	29	28	28
		67	39	27	37	26	35	25	33	24	31	23
		72	43	22	41	21	39	20	37	19	34	19
	85	62	36	36	35	35	33	33	32	32	30	30
		67	39	32	37	31	35	30	33	29	31	28
		72	43	27	41	26	39	25	37	24	34	23

Notes: 1. Performance based on matched air-cooled unit and remote condenser. 2. All capacities are gross and have not considered indoor fan heat. 3. CAP = total gross cooling capacity. 4. SHC = sensible heat capacity.

Performance Data

Air-Cooled 5 Ton

Table PD-15. SCRB/SIRB 5 Gross Cooling Capacity

			Entering Ambient Air Temperature									
			75°F		85°F		95°F		105°F		115°F	
Airflow cfm	EDB F	EWB F	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh
1600	70	62	59	35	62	27	51	32	-	-	-	-
		67	65	28	54	33	56	25	-	-	-	-
		72	57	34	59	26	-	-	-	-	-	-
	75	62	59	42	57	41	54	40	51	38	48	37
		67	65	35	62	34	59	33	56	31	53	30
		72	71	28	68	27	65	26	62	24	58	23
	80	62	59	49	57	48	54	46	51	45	48	44
		67	65	42	62	41	59	39	56	38	53	37
		72	71	35	68	33	65	32	62	31	58	30
	85	62	59	56	57	54	54	53	52	51	49	49
		67	65	49	62	47	59	46	56	45	53	43
		72	70	41	68	40	65	39	61	38	58	36
2000	70	62	62	38	65	28	53	34	-	-	-	-
		67	67	29	56	35	58	26	-	-	-	-
		72	59	37	62	27	-	-	-	-	-	-
	75	62	62	46	59	45	56	43	53	42	50	41
		67	67	38	65	36	62	35	58	34	55	32
		72	73	29	70	28	67	27	64	25	60	24
	80	62	61	54	59	53	56	51	53	50	50	49
		67	67	46	64	44	62	43	58	42	55	40
		72	73	37	70	36	67	35	64	33	60	32
	85	62	62	61	60	60	57	57	55	55	52	52
		67	67	53	64	52	61	51	58	50	55	48
		72	73	45	70	44	67	42	64	41	60	40
2400	70	62	63	40	66	29	55	36	-	-	-	-
		67	69	30	58	38	60	27	-	-	-	-
		72	61	39	63	28	-	-	-	-	-	
	75	62	63	49	61	48	58	47	55	45	51	44
		67	69	40	66	38	63	37	60	36	56	34
		72	75	30	72	29	69	27	65	26	61	25
	80	62	63	59	61	57	58	56	55	54	52	52
		67	69	49	66	48	63	46	60	45	56	44
		72	75	39	72	38	69	37	65	35	61	34
	85	62	65	65	63	63	60	60	58	58	55	55
		67	69	58	66	57	63	56	60	54	56	53
		72	75	48	72	47	69	46	65	44	61	43

Notes: 1. Performance based on matched air-cooled unit and remote condenser. 2. All capacities are gross and have not considered indoor fan heat. 3. CAP = total gross cooling capacity. 4. SHC = sensible heat capacity.

Table PD-16. SCRB/SIRB 7.5 Gross Cooling Capacity

			Entering Ambient Air Temperature									
			75°F		85°F		95°F		105°F		115°F	
Airflow cfm	EDB F	EWB F	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh
2400	70	62	91	54	94	41	76	47	-	-	-	-
		67	99	44	81	50	84	37	-	-	-	-
		72	86	52	89	39	-	-	-	-	-	-
	75	62	91	65	86	62	81	60	76	58	71	55
		67	99	54	94	52	89	49	84	47	78	45
		72	109	43	103	41	98	39	92	36	-	-
	80	62	90	75	86	72	81	70	76	68	71	65
		67	99	64	94	62	89	60	84	57	78	55
		72	108	53	03	51	98	49	92	47	-	-
	85	62	90	85	86	83	81	80	77	77	73	73
		67	99	74	94	72	89	70	84	67	78	65
		72	108	63	103	61	98	59	92	57	-	-
3000	70	62	95	58	98	43	79	51	-	-	-	-
		67	104	45	85	53	87	38	-	-	-	-
		72	90	56	93	41	-	-	-	-	-	-
	75	62	94	70	90	68	84	66	79	63	74	61
		67	103	57	98	55	93	53	87	51	-	-
		72	113	44	107	42	101	40	95	38	-	-
	80	62	94	82	89	80	84	78	79	75	74	73
		67	103	70	98	67	93	65	87	63	-	-
		72	113	57	107	54	101	52	95	50	-	-
	85	62	95	94	90	90	86	86	82	82	78	78
		67	103	82	98	79	92	77	87	75	-	-
		72	113	69	107	67	101	64	95	62	-	-
3600	70	62	97	61	101	44	81	54	-	-	-	-
		67	107	47	87	57	89	40	-	-	-	-
		72	92	59	95	42	-	-	-	-	-	-
	75	62	97	75	92	73	87	71	81	68	76	66
		67	106	61	101	58	95	56	89	54	-	-
		72	116	46	110	44	104	41	98	39	-	-
	80	62	97	89	92	87	87	85	82	82	77	77
		67	106	75	101	72	95	70	89	68	-	-
		72	116	60	110	58	104	55	98	53	-	-
	85	62	99	99	95	95	91	91	86	86	82	82
		67	106	89	101	86	95	84	89	82	-	-
		72	116	74	110	71	104	69	98	67	-	-

Notes: 1. Performance based on matched air-cooled unit and remote condenser. 2. All capacities are gross and have not considered indoor fan heat. 3. CAP = total gross cooling capacity. 4. SHC = sensible heat capacity.

Performance Data

Air-Cooled 10 Ton

Table PD-17. SCRB/SIRB 10 Gross Cooling Capacity

			Entering Ambient Air Temperature									
			75°F		85°F		95°F		105°F		115°F	
Airflow cfm	EDB F	EWB F	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh
3200	70	62	123	74	129	57	107	66	-	-	-	-
		67	135	59	113	68	117	51	-	-	-	-
		72	118	71	124	54	-	-	-	-	-	-
	75	62	123	87	118	85	113	82	107	79	-	-
		67	135	73	129	70	123	68	117	65	-	-
		72	147	58	141	56	135	53	128	51	-	-
	80	62	123	101	118	99	113	96	107	93	-	-
		67	134	87	129	84	123	82	117	79	-	-
		72	147	72	141	69	135	67	128	64	-	-
	85	62	123	115	118	112	113	110	107	106	102	102
		67	134	100	129	98	123	95	117	92	110	90
		72	147	85	141	83	135	81	128	78	121	75
4000	70	62	128	79	135	59	111	71	-	-	-	-
		67	140	61	117	73	122	53	-	-	-	-
		72	123	76	128	56	-	-	-	-	-	-
	75	62	128	95	123	93	117	90	111	87	-	-
		67	140	78	134	75	128	73	122	70	-	-
		72	153	60	146	58	140	55	133	52	-	-
	80	62	128	112	123	109	117	106	111	103	-	-
		67	140	94	134	92	128	89	121	86	-	-
		72	153	77	146	74	140	72	132	69	-	-
	85	62	129	127	124	124	119	119	114	114	109	109
		67	140	110	134	108	128	105	121	102	114	99
		72	152	93	146	90	139	88	132	85	125	82
4800	70	62	132	83	138	61	114	75	-	-	-	-
		67	144	63	121	78	125	55	-	-	-	-
		72	127	81	132	58	-	-	-	-	-	-
	75	62	132	102	127	100	120	97	114	94	-	-
		67	144	82	138	80	132	77	125	74	-	-
		72	157	62	150	60	143	57	136	54	-	-
	80	62	132	121	126	118	121	116	114	112	-	-
		67	144	101	138	98	131	96	124	93	-	-
		72	157	81	150	78	143	76	136	73	-	-
	85	62	135	135	130	130	125	125	120	120	114	114
		67	144	120	138	117	131	114	124	112	117	109
		72	157	99	150	97	143	94	135	92	127	89

Notes: 1. Performance based on matched air-cooled unit and remote condenser. 2. All capacities are gross and have not considered indoor fan heat. 3. CAP = total gross cooling capacity. 4. SHC = sensible heat capacity.

Table PD-18. SCRB/SIRB 15 Gross Cooling Capacity

			Entering Ambient Air Temperature									
			75°F		85°F		95°F		105°F		115°F	
Airflow cfm	EDB F	EWB F	Total MBh	Sensible Mbh	Total Mbh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh	Total MBh	Sensible MBh
4800	70	62	190	116	197	86	159	101	-	-	-	-
		67	207	91	169	106	174	77	-	-	-	-
		72	180	111	186	81	-	-	-	-	-	-
	75	62	189	140	179	135	169	130	158	125	-	-
		67	207	115	197	110	186	105	174	101	-	-
		72	226	89	215	85	203	80	191	76	-	-
	80	62	189	164	179	159	169	154	159	149	-	-
		67	207	138	196	134	185	129	174	124	-	-
		72	226	113	215	108	203	104	191	99	-	-
	85	62	190	187	180	180	172	172	163	163	-	-
		67	207	162	196	158	185	153	174	148	-	-
		72	226	137	214	132	203	128	191	123	-	-
6000	70	62	197	125	204	90	164	110	-	-	-	-
		67	216	95	176	115	180	80	-	-	-	-
		72	187	120	193	85	-	-	-	-	-	-
	75	62	197	154	187	149	176	144	164	139	-	-
		67	215	124	204	119	192	114	180	109	-	-
		72	235	93	223	88	210	84	197	79	-	-
	80	62	197	183	187	178	177	173	165	165	-	-
		67	215	152	204	148	192	143	180	138	-	-
		72	235	122	222	117	210	113	197	108	-	-
	85	62	202	202	193	193	184	184	175	175	-	-
		67	215	181	204	176	192	171	180	167	-	-
		72	234	150	222	146	210	141	197	136	-	-
7200	70	62	203	133	210	93	168	118	-	-	-	-
		67	222	98	180	124	185	84	-	-	-	-
		72	192	129	197	89	-	-	-	-	-	-
	75	62	203	167	192	162	180	157	168	152	-	-
		67	221	132	209	127	197	122	185	117	-	-
		72	241	96	228	92	215	87	202	82	-	-
	80	62	204	200	193	193	183	183	174	174	-	-
		67	221	165	209	160	197	156	184	151	-	-
		72	241	130	228	125	215	120	202	116	-	-
	85	62	213	213	204	204	194	194	184	184	-	-
		67	221	199	209	194	198	189	186	183	-	-
		72	240	163	228	158	215	154	201	149	-	-

Notes: 1. Performance based on matched air-cooled unit and remote condenser. 2. All capacities are gross and have not considered indoor fan heat. 3. CAP = total gross cooling capacity. 4. SHC = sensible heat capacity.

Table PD-19. Hot Water Coil Heating Capacity, 180°F Entering Water Temperature

			Water Temperature Drop								
			20°F			30°F			40°F		
Unit Size	Airflow cfm	EAT F	Flow gpm	Capacity MBh	LAT F	Flow gpm	Capacity MBh	LAT F	Flow gpm	Capacity MBh	LAT F
3 Ton	960	40	4.3	43.3	81.6	2.3	35.7	74.3	1.2	24.5	63.5
		60	3.5	35.2	93.8	1.8	27.1	86.1	0.7	13.4	72.9
		80	2.7	27.1	106.0	1.2	17.2	96.5	0.5	10.2	89.8
	1200	40	4.8	47.9	76.8	2.6	39.6	70.4	1.4	28.0	61.5
		60	3.9	38.9	89.9	2.0	30.2	83.2	0.7	14.0	70.8
		80	3.0	30.0	103.0	1.3	19.7	95.1	0.5	10.6	88.1
	1440	40	5.1	51.5	73.0	2.8	42.7	67.3	1.5	30.7	60.0
		60	4.2	41.9	86.8	2.2	32.7	80.9	0.7	14.3	69.2
		80	3.2	32.3	100.7	1.4	21.6	93.8	0.5	10.8	86.9
5 Ton	1600	40	6.5	64.9	75.3	3.7	55.6	70.2	2.3	45.1	64.5
		60	5.2	52.4	89.6	2.9	43.3	84.5	1.5	30.8	77.4
		80	4.0	40.2	103.6	2.0	30.7	98.0	0.7	13.1	87.7
	2000	40	7.1	70.6	70.7	4.0	60.4	66.2	2.5	49.2	61.4
		60	5.7	57.0	85.8	3.1	47.1	81.3	1.7	34.2	75.5
		80	4.4	43.8	100.6	2.2	33.6	95.8	0.7	13.4	86.3
	2400	40	7.5	75.1	67.2	4.3	64.1	63.2	2.6	52.4	59.0
		60	6.1	60.7	82.9	3.3	50.1	78.9	1.8	36.8	73.9
		80	4.7	46.7	98.3	2.4	36.0	94.1	0.7	13.7	85.4
7.5 Ton	2400	40	8.6	86.5	71.3	5.0	75.4	67.3	3.2	64.2	63.2
		60	7.0	70.2	86.4	4.0	59.6	82.4	2.4	47.7	78.0
		80	5.4	54.4	101.3	3.0	44.0	97.2	1.4	28.6	91.2
	3000	40	9.3	93.2	67.0	5.4	81.1	63.5	3.5	69.0	60.0
		60	7.5	75.7	82.8	4.3	64.1	79.3	2.6	51.6	75.5
		80	5.9	58.7	98.4	3.1	47.5	94.8	1.6	31.9	90.0
	3600	40	9.8	98.3	63.7	5.7	85.5	60.6	3.6	72.6	57.5
		60	8.0	80.0	80.1	4.5	67.6	77.0	2.7	54.5	73.7
		80	6.2	62.1	96.2	3.3	50.1	93.1	1.7	34.3	89.0
10 Ton	3200	40	18.8	188.0	94.1	11.5	172.1	89.6	7.8	156.2	85.0
		60	15.7	157.0	105.1	9.4	141.2	100.7	6.3	125.5	96.2
		80	-	-	-	7.4	110.2	111.8	4.7	94.7	107.3
	4000	40	21.0	211.0	88.5	12.8	192.6	84.4	8.7	174.5	80.2
		60	17.5	176.0	100.5	10.5	157.9	96.4	7.0	140.1	92.3
		80	14.1	141.0	112.4	8.2	123.2	108.4	5.3	105.5	104.3
	4800	40	22.9	229.1	84.0	14.0	209.4	80.2	9.5	189.6	76.4
		60	19.1	191.0	96.7	11.4	171.5	92.9	7.6	152.0	89.2
		80	15.3	153.0	109.4	8.9	133.8	105.7	5.7	114.3	102.0
15 Ton	4800	40	26.0	260.5	87.2	16.1	241.8	83.8	11.1	222.7	80.3
		60	21.4	214.1	100.3	13.0	195.8	96.9	8.9	177.4	93.4
		80	16.9	169.5	113.1	10.1	151.6	109.7	6.7	133.7	106.1
	6000	40	28.8	288.0	81.7	17.8	266.9	78.7	12.3	245.7	75.6
		60	23.7	237.1	95.7	14.4	216.5	92.6	9.8	195.9	89.5
		80	18.8	187.9	109.4	11.2	167.9	106.3	7.4	147.6	103.1
	7200	40	31.0	310.2	77.5	19.1	287.2	74.7	13.2	264.1	71.9
		60	25.5	255.6	92.1	15.5	233.2	89.3	10.5	210.7	86.5
		80	20.2	202.7	106.4	12.2	181.0	103.6	8.0	158.8	100.7

Table PD-20. Hot Water Coil Heating Capacity, 200°F Entering Water Temperature

			Water Temperature Drop								
			20°F			30°F			40°F		
Unit Size	Airflow cfm	EAT F	Flow gpm	Capacity MBh	LAT F	Flow gpm	Capacity MBh	LAT F	Flow gpm	Capacity MBh	LAT F
		40	5.2	52.3	90.2	3.0	45.6	83.8	1.9	37.8	76.3
	960	60	4.4	44.2	102.4	2.5	37.4	96.0	1.4	28.9	87.7
		80	3.6	36.1	114.7	1.9	29.1	108.0	0.9	17.9	97.2
		40	5.8	57.9	84.5	3.3	50.3	78.6	2.1	42.0	72.3
3 Ton	1200	60	4.9	48.9	97.6	2.7	41.3	91.8	1.6	32.3	84.8
		80	4.0	39.9	110.7	2.1	32.3	104.8	1.0	30.0	96.1
		40	6.2	62.4	80.0	3.6	54.1	74.6	2.2	45.3	69.0
	1440	60	5.2	52.6	93.7	3.0	44.5	88.5	1.7	35.0	82.4
		80	4.3	42.9	107.5	2.3	34.8	102.3	1.1	23.2	94.9
		40	7.8	77.8	82.3	4.6	69.0	77.5	3.0	60.1	72.7
	1600	60	6.5	65.0	96.7	3.8	56.4	91.9	2.4	47.5	86.9
		80	5.2	52.6	110.9	2.9	44.4	106.0	1.7	34.6	100.3
		40	8.4	84.7	76.8	5.0	75.0	72.6	3.3	65.2	68.3
5 Ton	2000	60	7.1	70.8	92.0	4.1	61.4	87.8	2.6	51.8	83.4
		80	5.7	57.3	107.0	3.2	48.3	102.7	1.9	38.0	97.8
		40	9.0	90.2	72.6	5.2	79.6	68.8	3.4	69.2	65.0
	2400	60	7.5	75.4	88.4	4.3	65.3	84.6	2.7	55.0	80.7
		80	6.9	61.2	103.9	3.4	51.4	100.1	2.0	40.6	95.9
		40	10.3	103.2	77.4	6.1	92.6	73.5	4.0	82.1	69.7
	2400	60	8.6	86.5	92.6	5.1	76.3	88.7	3.3	66.1	84.9
		80	7.0	70.4	107.6	4.0	60.5	103.7	2.5	50.4	99.7
		40	11.1	111.2	77.2	6.6	99.6	68.9	4.4	88.1	65.5
7.5 Ton	3000	60	9.3	93.4	88.2	5.5	82.2	84.8	3.5	71.1	81.4
		80	7.6	76.1	103.8	4.3	65.3	100.4	2.7	54.3	97.0
		40	11.7	117.4	68.3	7.0	105.1	65.4	4.6	92.8	62.4
	3600	60	9.8	98.7	84.8	5.8	86.8	81.8	3.7	74.8	78.8
		80	8.0	80.5	101.0	4.6	68.9	98.0	2.8	57.3	94.9
		40	21.9	200.2	103.4	13.6	205.2	99.1	9.5	190.1	94.8
	3200	60	18.8	189.1	114.5	11.6	174.2	110.2	7.9	159.1	105.9
		80	-	-	-	-	-	-	-	-	-
		40	24.6	247.1	97.0	15.3	230.0	93.0	10.6	212.6	89.0
10 Ton	4000	60	21.1	212.1	108.9	13.0	195.1	105.0	8.9	177.8	101.0
		80	-	-	-	--	-	-	7.2	143.2	113.0
		40	26.8	269.1	91.7	16.6	250.1	88.1	11.5	231.0	84.4
	4800	60	23.0	230.9	104.4	14.1	212.1	100.7	9.6	193.2	97.1
		80	-	-	-	11.6	174.1	113.4	7.8	155.5	109.9
		40	30.3	304.4	95.1	19.0	286.3	91.8	13.4	267.9	88.5
	4800	60	25.6	257.1	108.4	15.9	239.5	105.1	11.1	221.5	101.7
		80	-	-	-		-	-	8.8	177.0	144.6
		40	33.5	336.7	88.8	21.0	316.3	85.8	14.7	295.7	82.8
15 Ton	6000	60	28.4	284.8	102.9	17.6	264.9	99.9	12.2	244.9	96.9
		80	-	-	-	14.3	215.3	113.7	9.8	195.8	110.6
		40	-	-	-	22.6	340.4	81.1	15.9	318.0	78.4
	7200	60	30.6	307.2	98.6	19.0	285.5	95.8	13.2	263.7	93.1
		80	25.3	253.5	113.0	15.4	232.2	110.3	10.5	211.0	107.5

Table PD-21. Steam Coil Heating Capacity

			Steam PSIG					
			2		5		25	
Unit Size	Airflow cfm	EAT F	Capacity MBh	LAT F	Capacity MBh	LAT F	Capacity MBh	LAT F
3 Ton	960	40	87.8	124.4	92.0	128.4	115.0	147.2
		60	78.0	134.9	82.2	139.0	101.7	157.7
		80	68.1	145.5	72.4	149.6	91.7	168.3
	1200	40	98.8	115.9	103.5	119.6	125.5	136.5
		60	87.7	127.4	92.5	131.1	114.4	148.0
		80	76.6	138.9	81.4	142.6	103.3	159.5
	1440	40	109.1	109.9	114.0	113.3	138.6	128.8
		60	96.8	122.1	102.1	125.4	126.4	141.0
		80	84.6	134.2	89.9	137.6	114.1	153.1
5 Ton	1600	40	138.1	119.6	144.8	123.5	175.5	141.2
		60	122.7	130.7	129.3	134.6	160.0	152.3
		80	107.2	141.8	113.9	145.7	144.6	163.4
	2000	40	155.3	111.6	162.8	115.1	197.3	131.0
		60	137.9	123.6	145.4	127.1	179.9	143.0
		80	120.5	135.6	128.0	139.1	162.5	155.0
	2400	40	171.6	106.0	179.9	109.2	218.0	123.8
		60	152.4	118.6	160.7	121.8	198.8	136.4
		80	133.1	131.2	141.5	134.4	179.6	149.0
7.5 Ton	2400	40	201.2	117.3	210.9	121.1	255.6	138.3
		60	178.6	128.7	188.4	132.4	233.1	149.6
		80	156.1	140.0	165.8	143.8	210.5	160.9
	3000	40	226.4	109.6	237.4	113.0	287.7	128.5
		60	201.0	121.8	212.0	125.2	262.4	140.7
		80	175.7	134.0	186.7	137.4	237.0	152.9
	3600	40	250.5	104.2	262.7	107.3	318.4	121.6
		60	222.5	117.0	234.6	120.1	290.3	134.4
		80	194.4	129.8	206.6	133.0	262.3	147.2
10 Ton	3200	40	235.3	107.9	247.7	111.4	303.9	127.6
		60	209.4	120.4	221.6	123.9	277.2	139.9
		80	183.3	132.9	195.4	136.3	250.5	152.2
	4000	40	263.1	100.7	277.3	104.0	341.3	118.7
		60	234.2	114.0	248.1	117.2	311.3	131.8
		80	205.2	127.4	218.8	130.5	281.2	144.9
	4800	40	-	-	301.0	97.9	371.5	111.4
		60	254.1	108.9	269.4	111.8	388.9	125.1
		80	222.8	122.8	237.8	125.7	306.2	138.9
15 Ton	4800	40	336.4	104.7	354.6	108.2	436.8	124.0
		60	229.5	117.6	317.4	121.0	398.4	136.6
		80	262.5	130.5	280.0	133.8	360.0	149.2
	6000	40	-	-	396.9	101.1	491.1	115.5
		60	335.1	111.5	355.5	114.7	447.9	128.9
		80	293.8	125.2	313.7	128.3	404.8	142.3
	7200	40	-	-	434.8	95.7	537.3	108.9
		60	-	-	389.6	109.6	490.3	122.8
		80	321.8	121.3	344.0	124.1	445.3	137.1

Electrical Data

Electrical Data Calculations

RLA = Rated Load Amps
Compressor LRA = Locked Rotor Amps
Fan Motor LRA = Locked Rotor Amps, N.E.C. Table 430 - 151
FLA = Full Load Amps, N.E.C. Table 430 - 150

Voltage utilization range is ±10 percent

Determination of Minimum Circuit Ampacity (MCA)
MCA = 1.25 x largest motor amps (FLA or RLA) + the sum of the remaining motor amps.

Determination of Maximum Fuse Size (MFS) and Maximum Circuit Breaker Size (MCB)
MFS and MCB = 2.25 x largest motor amps (FLA or RLA) + the sum of the remaining motor amps.

If the rating value determined does not equal a standard current rating of over current protective device, use the next lower standard rating for the marked maximum rating.

Note: MFS for CXRA units is for non-time delay fuses.

Table ED-1. SCWB/SIWB/SCRB/SIRB Electrical Data

		SCWB/SIWB Compressor Motor Data				SCRB/SIRB Compressor Motor Data			Fan Motor Data				SCWB/SIWB		SCRB/SIRB	
		Qty.	RLA	LRA	kW	RLA	LRA	kW	Qty/hp	FLA	LRA	kW	MCA	MFS	MCA	MFS
3 Ton	208-230V	1	10.5	101	3.0	10.5	101	3.0	1/0.5	4.0	21	0.44	17	25	17	25
	460V	1	4.2	51	3.0	4.2	51	3.0	1/0.5	1.0	6	0.44	6	15	6	15
	575V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 Ton	208-230V	1	15.4	118	5.2	15.4	118	5.2	1/0.75	4.5	31	0.73	24	35	24	35
	460V	1	10.0	71	5.2	10.0	71	5.2	1/0.75	1.4	8	0.73	14	20	14	20
	575V	1	5.8	43	5.2	5.8	43	5.2	1/0.75	1.4	11	0.73	9	15	9	15
7.5 Ton	208-230V	1	25.9	164	7.5	24.7	164	7.5	1/1.0	3.7	22	1.1	36	60	35	50
	460V	1	11.2	79	7.5	10.7	79	7.5	1/1.0	1.8	11	1.1	16	25	15	25
	575V	1	8.4	63	7.5	8.4	63	7.5	1/1.5	1.8	16	1.1	12	20	12	20
10 Ton	208-230V	2	15.4	118	5.3	15.4	118	5.3	1/2.0	7.5	46	1.3	42	50	42	50
	460V	2	10.0	71	5.3	10.0	71	5.3	1/2.0	3.4	23	1.3	26	35	26	35
	575V	2	5.8	43	5.3	5.8	43	5.3	1/2.0	2.3	18	1.3	15	20	15	20
15 Ton	208-230V	2	25.9	164	7.5	24.7	164	7.5	1/3.0	10.6	72	1.9	69	90	66	90
	460V	2	11.2	79	7.5	10.7	79	7.5	1/3.0	4.8	38	1.9	30	40	29	35
	575V	2	8.4	63	7.5	8.4	63	7.5	1/3.0	3.3	23	1.9	22	30	22	30

Note: Fan motor kW base on three phase motors. Compressor kW based on 80/67°F to evaporator, nominal airflow, and 105°F condensing temperature, 3 phase/60hz.

Table ED-2. CCRA/CIRA Condenser Electrical Data

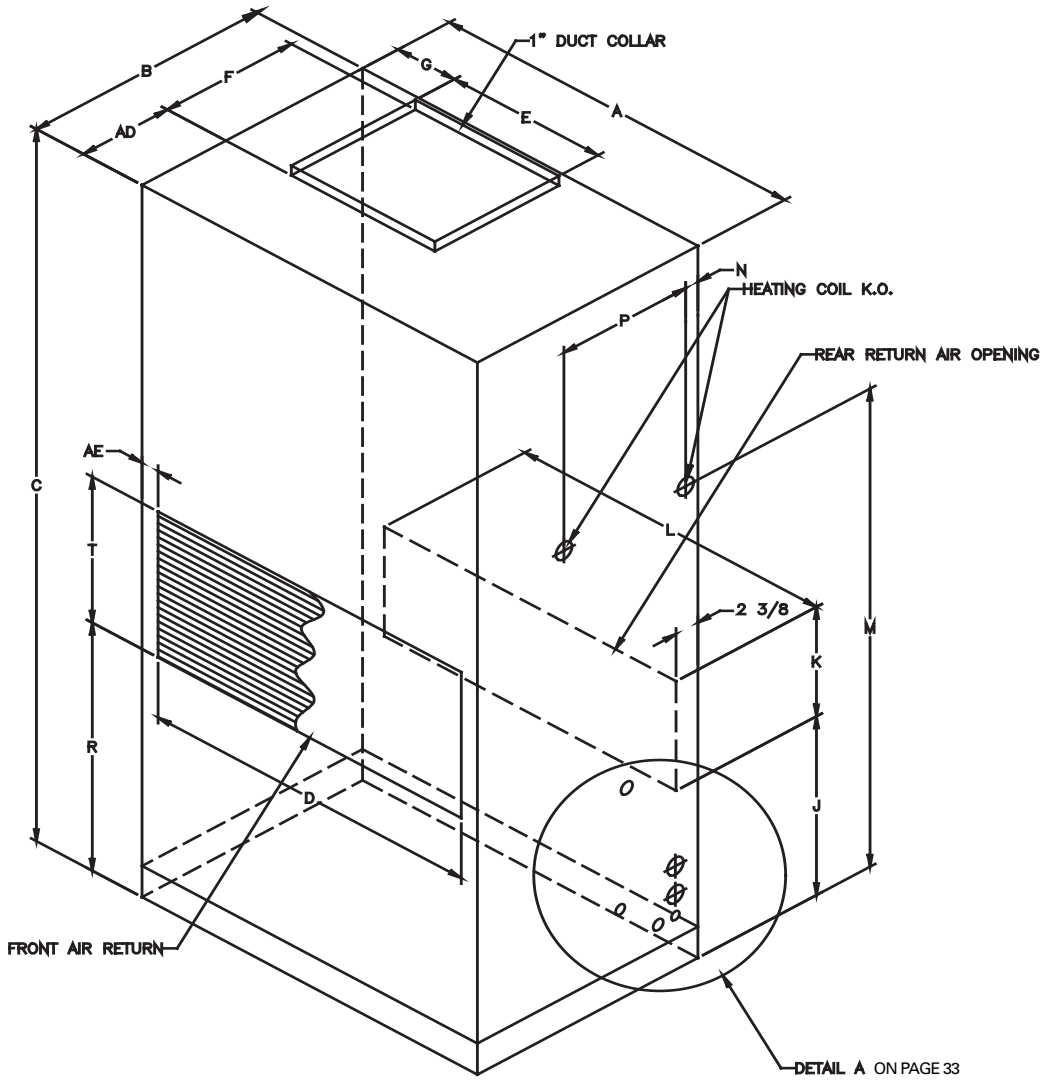
Unit Size Tons	Rated Voltage	#Fans/HP	FLA (ea.)	LRA (ea.)	kW	MCA	MFS
3	208-230	1/0.33	1.5	3.8	0.29	1.9	15
	460	1/0.33	0.9	2.0	0.29	1.1	15
	575	-	-	-	-	-	-
5	208-230	1/0.75	5.0	14.6	1.17	6.3	15
	460	1/0.75	2.7	6.3	1.17	3.4	15
	575	1/0.75	1.4	5.4	1.17	1.8	15
7.5	208-230	2/0.75	5.0	14.6	1.17	11.3	15
	460	2/0.75	2.7	6.3	1.17	6.1	15
	575	2/0.75	1.4	5.4	1.17	3.2	15
10	208-230	2/0.75	5.0	14.6	1.17	11.3	15
	460	2/0.75	2.7	6.3	1.17	6.1	15
	575	2/0.75	1.4	5.4	1.17	3.2	15
15	208-230	4/0.75	5.0	14.6	1.17	21.3	25
	460	4/0.75	2.7	6.3	1.17	11.5	15
	575	4/0.75	1.4	5.4	1.17	6.0	15

Note: Fan motor kW base on single phase motors. Compressor kW based on 80/67°F entering air to the evaporator, nominal airflow, and 105°F condensing temperature, single phase/60hz.

Dimensions and Weights

3 & 5-Ton Self-Contained

Models SCWB/SIWB/SCWB/SIRB
3 & 5-Ton Unit

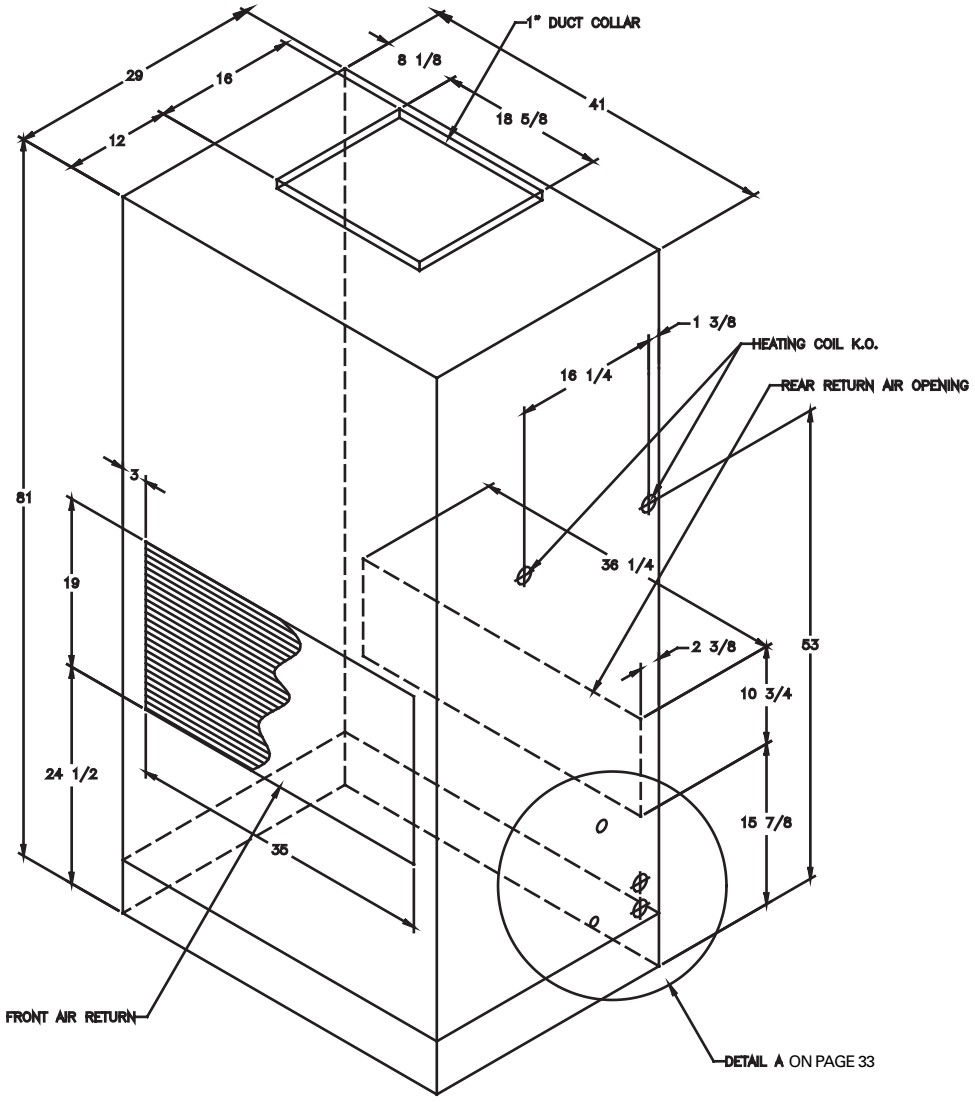


SCRB/SIRB/SCWB/SIWB 3 and 5-Ton Unit Dimensions, in.- lbs.

Unit	Width	Depth	Height	Discharge Duct			Rear Air Return			Heating Coil K.O.'s					Front Air Return		
Size	A	B	C	E	F	G	AD	J	K	L	M	N	P	R	T	D	AE
3-Ton	32	22 3/8	64 3/4	13 1/8	11 3/8	5 5/8	10	20 1/4	10	27 1/4	43 3/4	1 3/8	10 1/4	21 1/2	15	28 1/4	1 7/8
5-Ton	36 1/2	24	74	15 5/8	13 1/2	7 1/8	9 1/8	18	11 1/4	31 3/4	50	1 3/8	13 1/4	27 1/2	15	33	1 3/4

Unit	Drain		Water Inlet & Discharge Line		Water Outlet & Liquid Line		Wtr Reg. Valve Capillary K.O.		Electrical K.O.'s			Operating Weight		Shipping Weight	
Size	X	AB	W	Y	U	Y	V	AC	H	Y	AA	SXWB	SXRB	SXWB	SXRB
3-Ton	23 5/8	8 7/8	10 5/8	2 1/2	7 3/4	2 1/2	9 1/4	8 1/2	5 5/8	2 1/2	4 3/8	245	210	420	390
5-Ton	22 1/8	7 3/4	11 1/2	2 1/2	8 1/2	2 1/2	10	8 1/2	6 3/8	2 1/2	4 3/8	405	315	570	500

Models SCWB/SIWB/SCWB/SIRB 7.5-Ton Unit



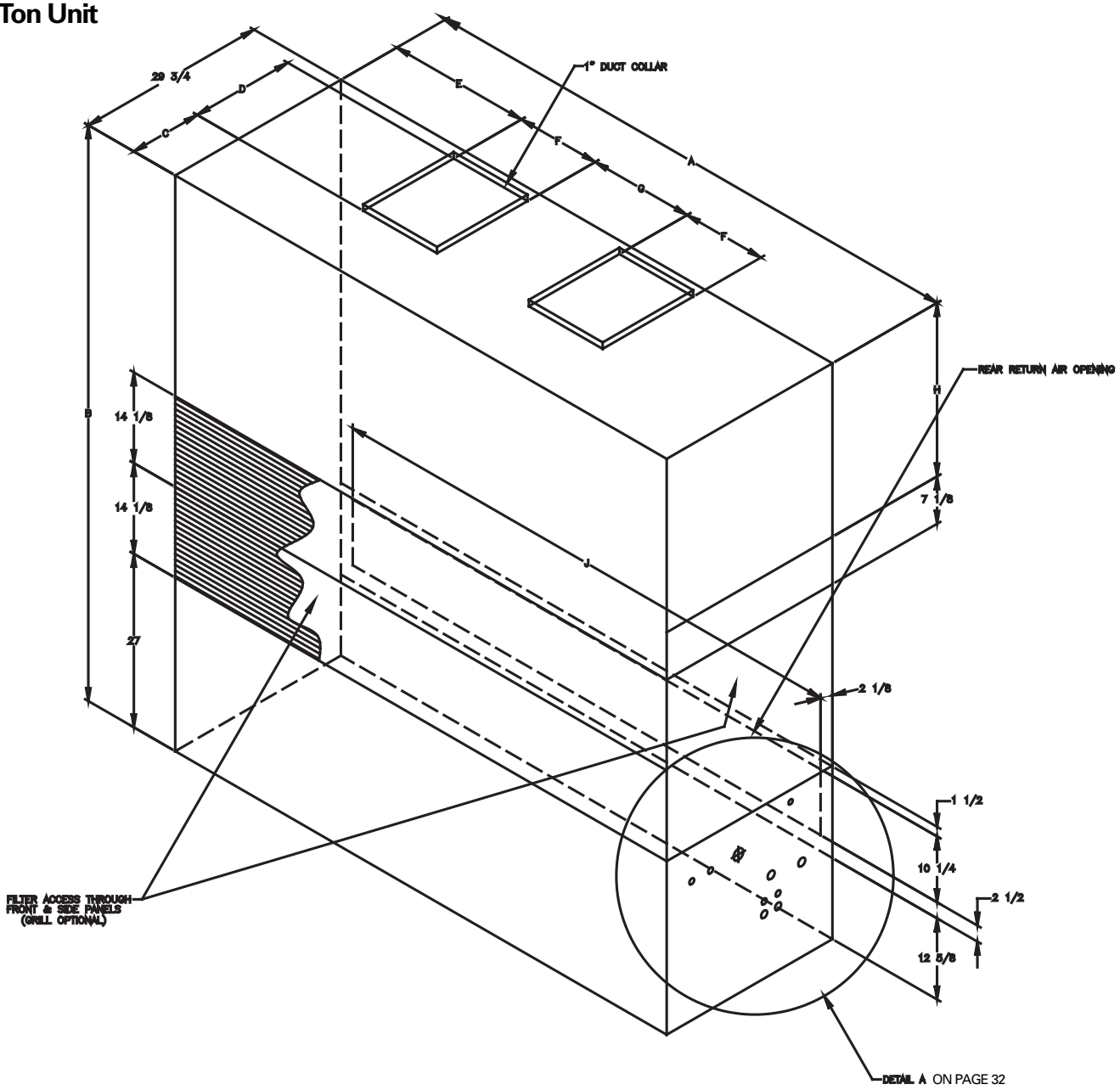
SCRB/SIRB/SCWB/SIWB 7.5-Ton Unit Weight, lbs.

Operating Weight		Shipping Weight	
SXWB	SXRB	SXWB	SXRB
509	400	730	640

Dimensions and Weights

10 & 15-Ton Self-Contained

Models SCWB/SIWB/SCWB/SIRB
10 & 15-Ton Unit



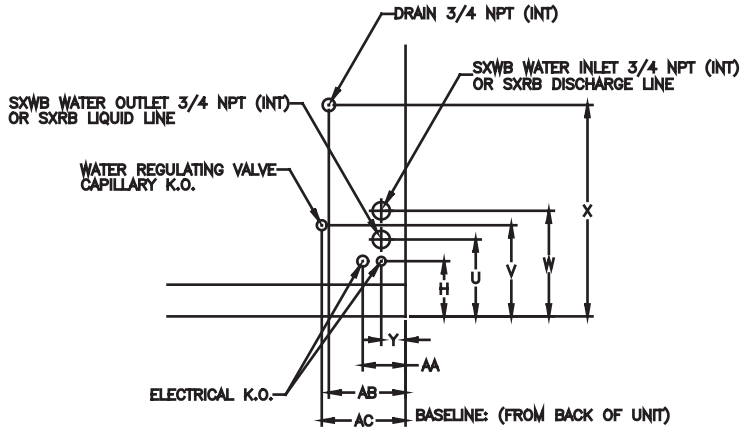
SCRB/SIRB/SCWB/SIWB 10 and 15-Ton Unit Dimensions, in. - lbs.

Unit	Width	Height	Discharge Duct					Blower Section Height	Rear Air Return	Operating Weight		Shipping Weight	
Size	A	B	C	D	E	F	G	H	J	SXWB	SXRB	SXWB	SXRB
10-Ton	65 3/4	85 5/8	14 1/8	13 1/2	6 3/4	12 1/4	17	23	61 1/2	920	818	1160	1040
15-Ton	88 1/4	89 5/8	11 3/8	16 1/4	22 3/8	13 1/4	16 1/2	27	84	1208	1115	1510	1350

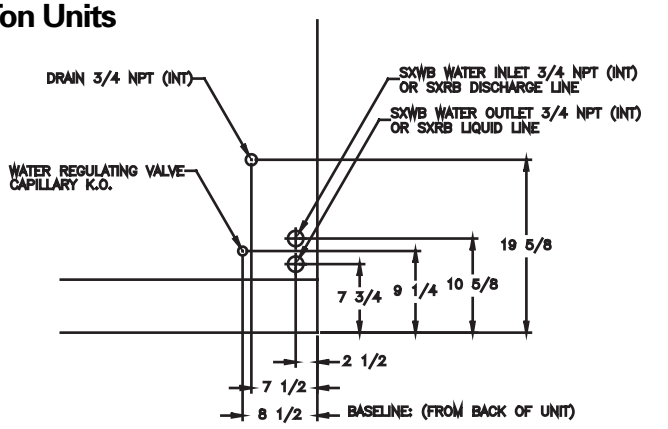
Dimensions and Weights

3–15 Ton Self-Contained

Detail "A"
3 and 5-Ton Units



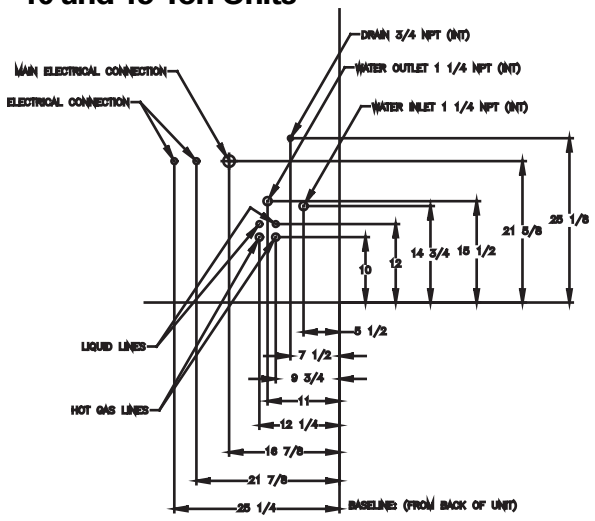
Detail "A"
7.5-Ton Units



NOTE: OPPOSITE SIDE OF UNIT IS MIRROR IMAG

NOTE: OPPOSITE SIDE OF UNIT IS MIRROR IMAGE.

Detail "A"
10 and 15-Ton Units

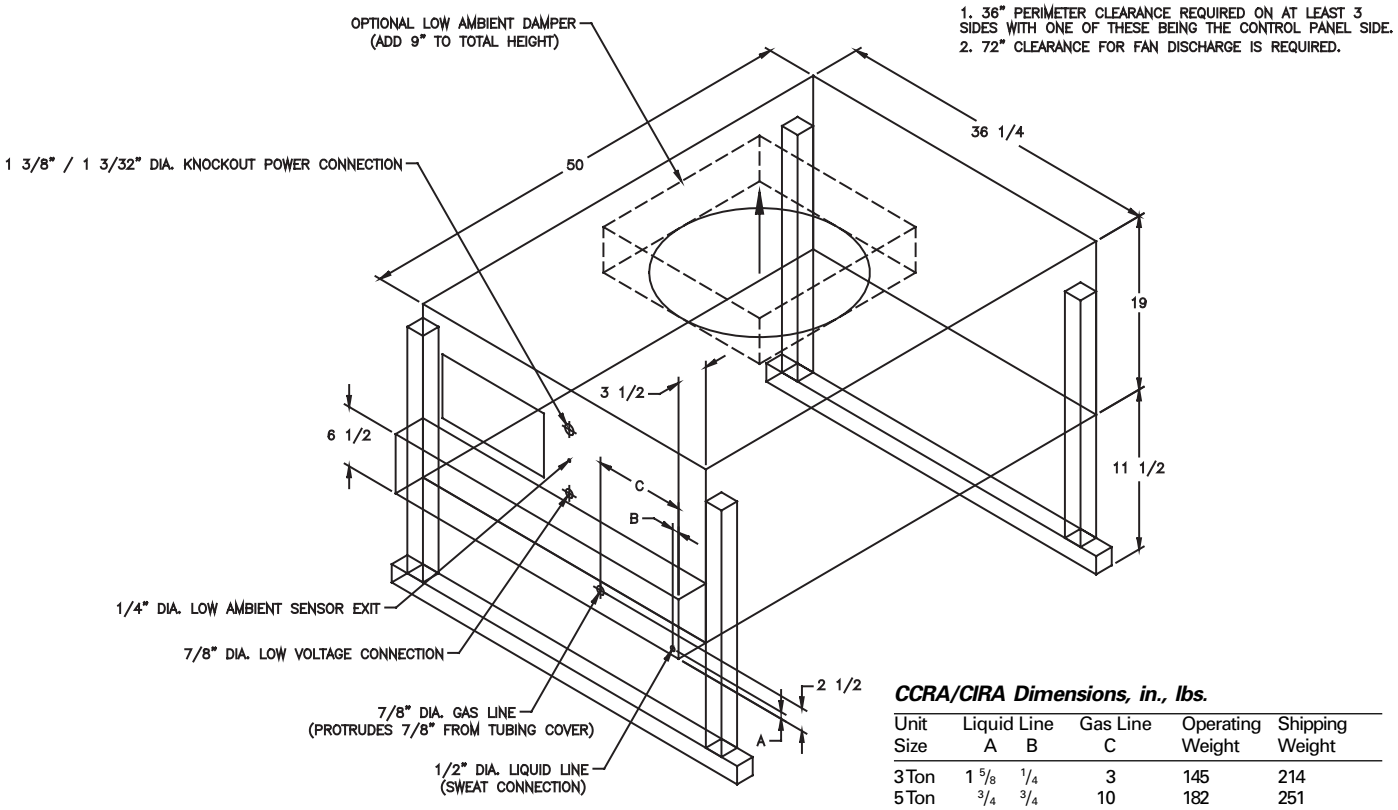


NOTE: OPPOSITE SIDE OF UNIT IS MIRROR IMAGE.

Dimensions and Weights

Air-Cooled Condenser

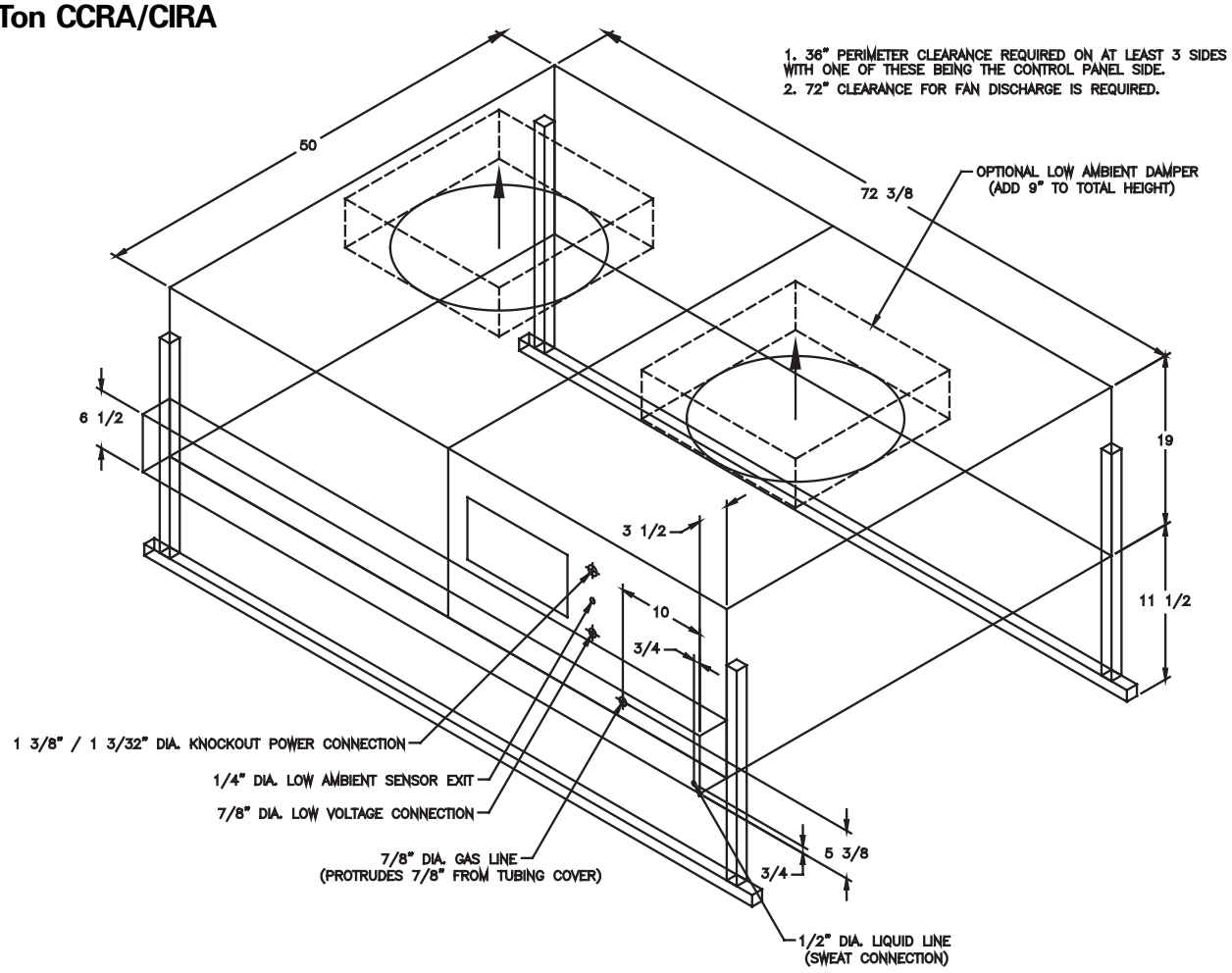
3 and 5-Ton CCRA/CIRA


1. 36" PERIMETER CLEARANCE REQUIRED ON AT LEAST 3 SIDES WITH ONE OF THESE BEING THE CONTROL PANEL SIDE.
2. 72" CLEARANCE FOR FAN DISCHARGE IS REQUIRED.
OPTIONAL LOW AMBIENT DAMPER (ADD 9" TO TOTAL HEIGHT)
1 3/8" / 1 3/32" DIA. KNOCKOUT POWER CONNECTION
50
36 1/4
19
11 1/2
3 1/2
6 1/2
C
B
1/4" DIA. LOW AMBIENT SENSOR EXIT
7/8" DIA. LOW VOLTAGE CONNECTION
7/8" DIA. GAS LINE (PROTRUDES 7/8" FROM TUBING COVER)
1/2" DIA. LIQUID LINE (SWEAT CONNECTION)
2 1/2
A

CCRA/CIRA Dimensions, in., lbs.

Unit Size	Liquid Line A	Liquid Line B	Gas Line C	Operating Weight	Shipping Weight
3 Ton	1 5/8	1/4	3	145	214
5 Ton	3/4	3/4	10	182	251

7.5-Ton CCRA/CIRA


1. 36" PERIMETER CLEARANCE REQUIRED ON AT LEAST 3 SIDES WITH ONE OF THESE BEING THE CONTROL PANEL SIDE.
2. 72" CLEARANCE FOR FAN DISCHARGE IS REQUIRED.
50
72 3/8
OPTIONAL LOW AMBIENT DAMPER (ADD 9" TO TOTAL HEIGHT)
6 1/2
19
3 1/2
11 1/2
10
3/4
1 3/8" / 1 3/32" DIA. KNOCKOUT POWER CONNECTION
1/4" DIA. LOW AMBIENT SENSOR EXIT
7/8" DIA. LOW VOLTAGE CONNECTION
7/8" DIA. GAS LINE (PROTRUDES 7/8" FROM TUBING COVER)
5 3/8
3/4
1/2" DIA. LIQUID LINE (SWEAT CONNECTION)

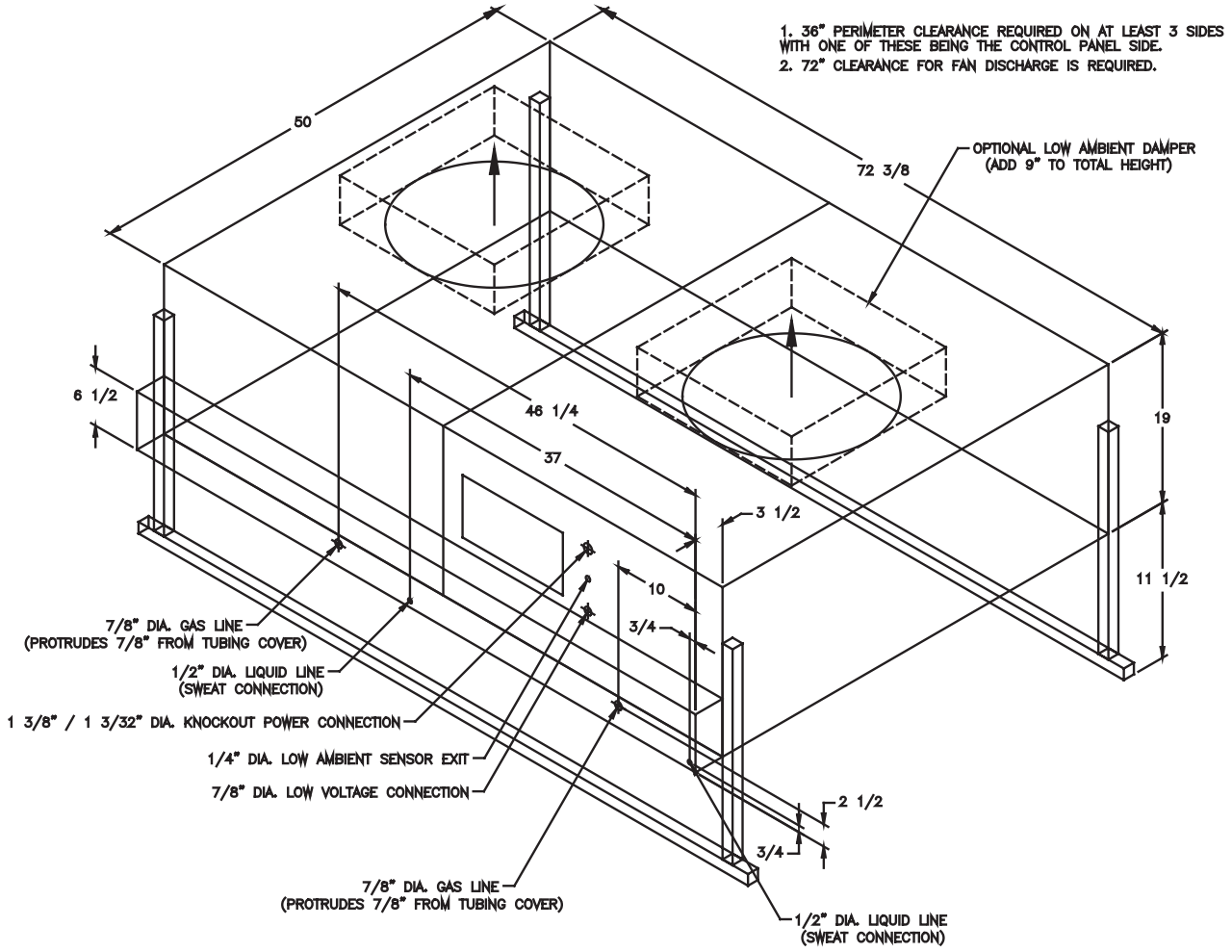
CCRA/CIRA Weight, lbs.

Unit Size	Operating Weight	Shipping Weight
7.5-Ton	364	502

Dimensions and Weights

Air-Cooled Condenser

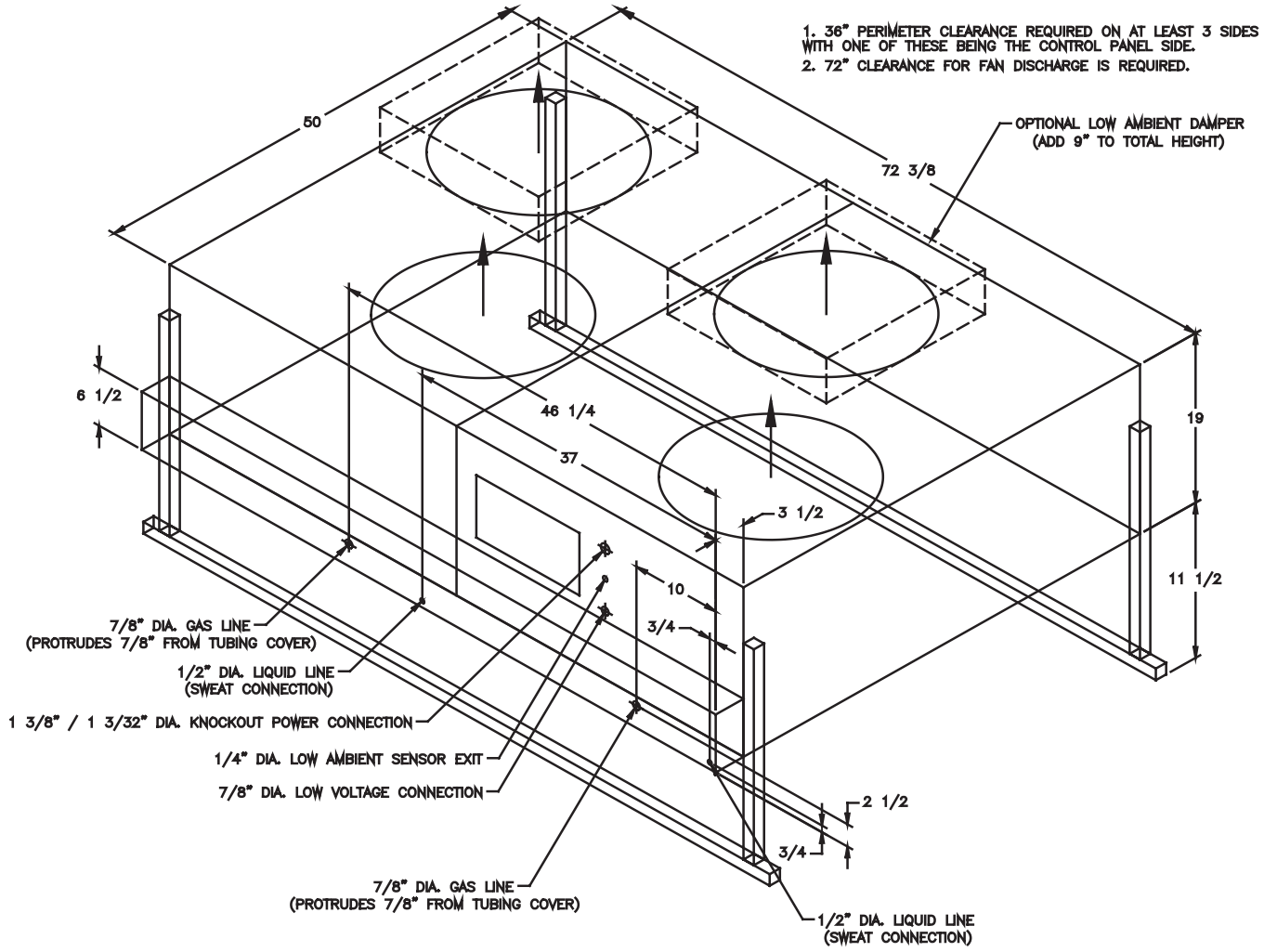
10-Ton CCRA/CIRA


1. 36" PERIMETER CLEARANCE REQUIRED ON AT LEAST 3 SIDES WITH ONE OF THESE BEING THE CONTROL PANEL SIDE.
2. 72" CLEARANCE FOR FAN DISCHARGE IS REQUIRED.
50
72 3/8
OPTIONAL LOW AMBIENT DAMPER (ADD 9" TO TOTAL HEIGHT)
6 1/2
46 1/4
37
19
3 1/2
11 1/2
10
3/4
7/8" DIA. GAS LINE (PROTRUDES 7/8" FROM TUBING COVER)
1/2" DIA. LIQUID LINE (SWEAT CONNECTION)
1 3/8" / 1 3/32" DIA. KNOCKOUT POWER CONNECTION
1/4" DIA. LOW AMBIENT SENSOR EXIT
7/8" DIA. LOW VOLTAGE CONNECTION
2 1/2
3/4
7/8" DIA. GAS LINE (PROTRUDES 7/8" FROM TUBING COVER)
1/2" DIA. LIQUID LINE (SWEAT CONNECTION)

CCRA/CIRA Weight, lbs.

Unit Size	Operating Weight	Shipping Weight
10-Ton	364	502

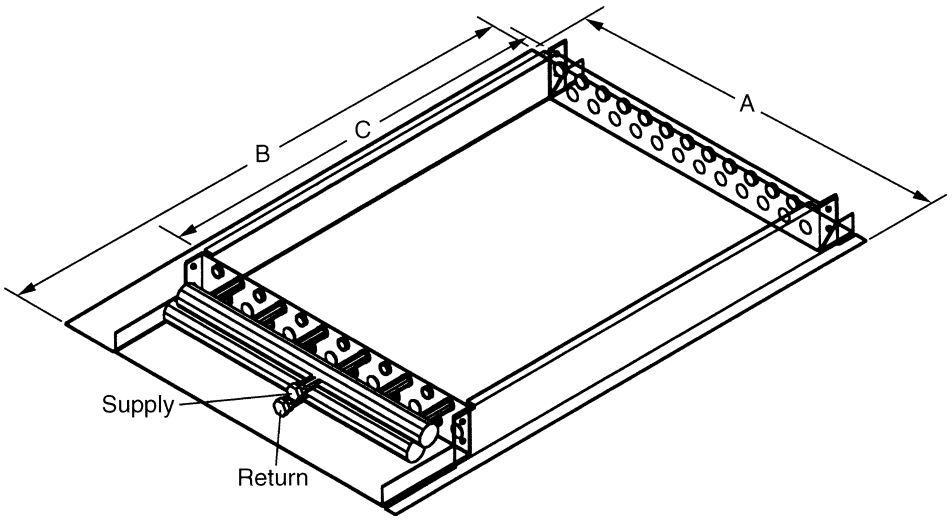
15-Ton CCRA/CIRA

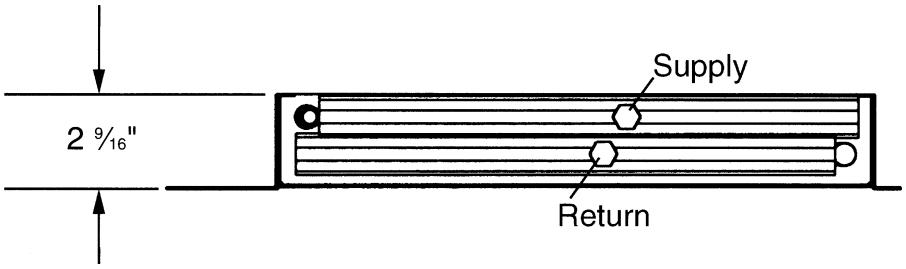

1. 36" PERIMETER CLEARANCE REQUIRED ON AT LEAST 3 SIDES WITH ONE OF THESE BEING THE CONTROL PANEL SIDE.
2. 72" CLEARANCE FOR FAN DISCHARGE IS REQUIRED.
OPTIONAL LOW AMBIENT DAMPER (ADD 9" TO TOTAL HEIGHT)
50
72 3/8
6 1/2
46 1/4
37
3 1/2
19
11 1/2
10
3/4
7/8" DIA. GAS LINE (PROTRUDES 7/8" FROM TUBING COVER)
1/2" DIA. LIQUID LINE (SWEAT CONNECTION)
1 3/8" / 1 3/32" DIA. KNOCKOUT POWER CONNECTION
1/4" DIA. LOW AMBIENT SENSOR EXIT
7/8" DIA. LOW VOLTAGE CONNECTION
2 1/2
3/4
7/8" DIA. GAS LINE (PROTRUDES 7/8" FROM TUBING COVER)
1/2" DIA. LIQUID LINE (SWEAT CONNECTION)

CCRA/CIRA Weight, lbs.

Unit Size	Operating Weight	Shipping Weight
15-Ton	440	563

Hot Water Coil





Hot Water Coil Dimensions, in., lbs.

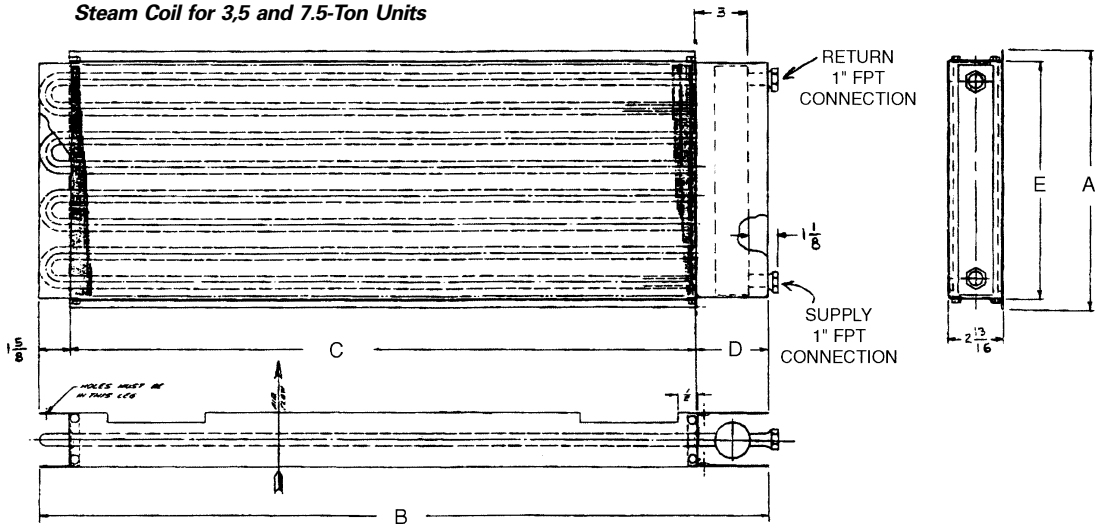
Unit Size	A	B	C	Weight
3-Ton	19 3/4	28	20 7/16	25
5-Ton	19 3/4	32 1/2	25	35
7.5-Ton	19 3/4	37 1/4	29 5/8	108
10-Ton	24 3/4	62 1/4	54 5/8	121
15-Ton	24 3/4	83 1/4	75 5/8	166

Dimensions and Weights

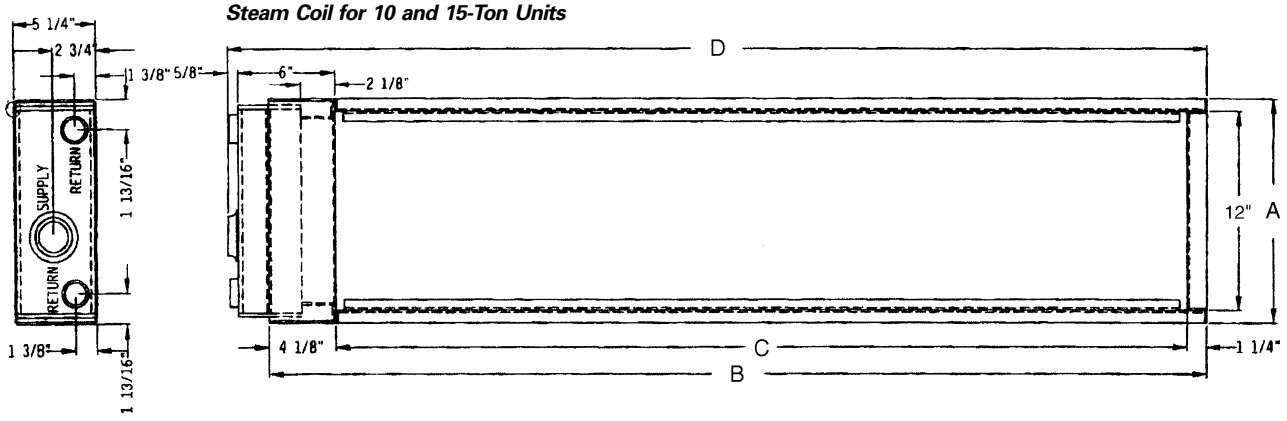
Steam Coil

Steam Coil

Steam Coil for 3,5 and 7.5-Ton Units



Steam Coil for 10 and 15-Ton Units

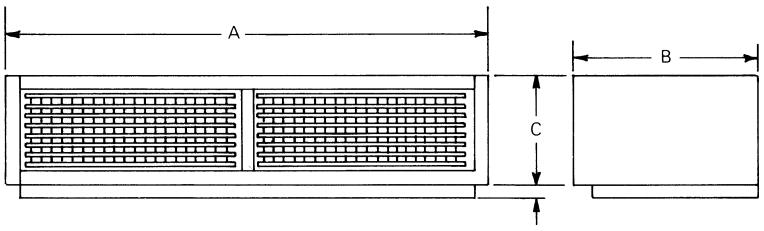


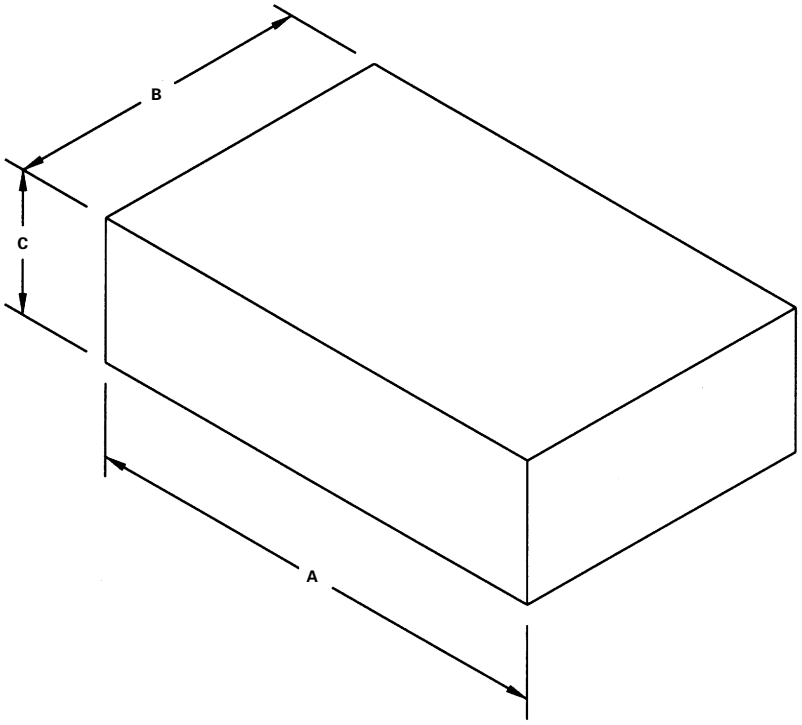
Steam Coil Dimensions, in., lbs.

Unit Size	A	B	C	D	E	Weight
3-Ton	$12^{21}/_{32}$	$28^{13}/_{16}$	$23^{1}/_{4}$	$3^{11}/_{16}$	12	27
5-Ton	$15^{5}/_{8}$	$33^{1}/_{4}$	28	$3^{5}/_{8}$	15	35
7.5-Ton	$18^{5}/_{8}$	$37^{1}/_{4}$	$31^{15}/_{16}$	$3^{11}/_{16}$	18	127
10-Ton	$13^{1}/_{2}$	$58^{3}/_{8}$	53	—	—	144
15-Ton	$13^{1}/_{2}$	$78^{3}/_{8}$	73	—	—	196

Discharge Plenum

Discharge Plenum



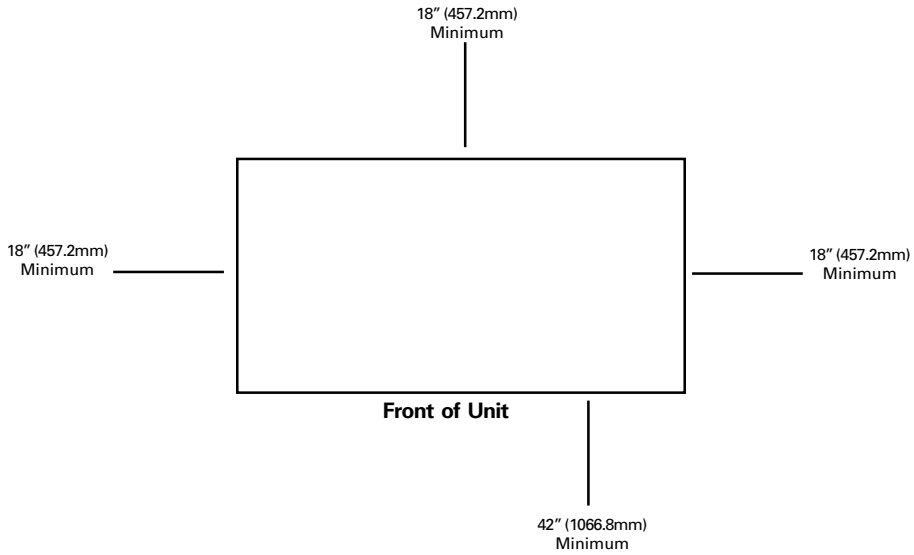


Discharge Plenum Dimensions, in., lbs.

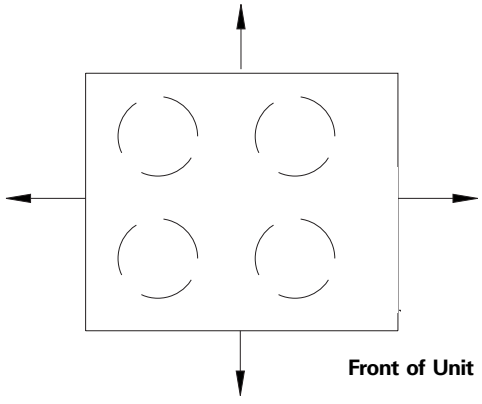
Unit Size	A	B	C	Weight
3-Ton	32	22 3/8	21 1/4	55
5-Ton	36 1/2	23 7/8	17 1/4	65
7.5-Ton	41	26 7/8	15 5/8	70
10-Ton	65 3/4	29 3/4	13 3/4	84
15-Ton	88 1/4	29 3/4	15 1/6	113

Service Clearances

Top View
SCWB/SIWB/SCRB/SIRB



Top View
CCRA/CIRA



Clearances: 36" perimeter clearance required on at least 3 sides, with one of these being the control panel side. 72" top clearance required for fan discharge.

Mechanical Specifications

Deluxe Self-Contained SCRB/SIRB/SCWB/SIWB

Cabinet
The unit framework is heavy gauge welded steel construction. Exterior panels are fabricated from 18-gauge zinc coated galvanized steel. The unit exterior is cleaned, phosphatized, and painted with an air-dry enamel finish. The fan and compressor sections are insulated with ¾-inch (19 mm) one-pound (0.5 kg) density fiberglass insulation.

The unit is provided with removable panels to allow service access to compressors, condensers, fan motor, bearings, coils, and valves. Knockouts are provided on both sides of the unit to allow electrical power, control wiring, piping connections, and fan shaft removal (10 and 15-ton units only). A decorative return air grille is provided on all 3, 5 and 7.5 ton units. The 10 and 15-ton cabinet separates into two sections for conversion into a horizontal configuration. This configuration has front and back access panels on the coil and compressor sections and front and back access to the blower section.

Compressors
The 3, 5, and 7.5 ton units have a single compressor and 10 and 15-ton units have dual compressors. Compressors are hermetic 3600 rpm motors with crankcase heaters as standard. Each compressor has its own independent refrigerant circuit. The compressors are protected with internal motor winding temperature cutouts and are mounted on rubber-in-shear isolators for vibration isolation.

Condenser (Water-Cooled)
The condenser is a shell and coil design with a finned, copper, inner tubing, and a steel outer shell. Piping connections are from either side of the unit. Each refrigerant circuit is provided with a separate condenser or pair of condensers. Condenser waterside working pressure cannot exceed 400 psig.

Evaporator
The evaporator coil is constructed of seamless copper tubes expanded into aluminum fins. Tubes are $^{3}/_{8}$-in (9.5 mm) OD with internally enhanced surfaces. Coils are factory leak tested to 475 psig.

The drain pan is galvanized steel. Knockouts are provided on both sides of the unit for condensate removal.

Refrigerant Circuit (Water-Cooled)
Refrigerant circuits are independent and completely piped including filter driers, distributors and thermal expansion valves with non-adjustable superheat. The circuits are leak-tested, dehydrated, and charged with oil and Refrigerant-22 at the factory. Shrader access valves are provided in the suction and liquid lines.

Refrigerant Circuit (Air-Cooled)
Refrigerant circuits are independent and completely piped including distributors and thermal expansion valves with non-adjustable superheat. The circuits are leak tested, dehydrated, and charged with oil and nitrogen at the factory. Shrader access valves are provided in the suction and liquid lines.

Supply Fan
The 3, 5 and 7.5 ton units have a single supply fan and the 10 and 15-ton units have two supply fans. Supply fans are forward curved centrifugal-type. The 10 and 15-ton units are secured to a solid steel shaft with permanently lubricated bearings. The drive components include variable pitch sheaves and V-belts. The supply fan motor is an open drip-proof type with a standard NEMA frame, permanently lubricated motor bearings, and a service factor of 1.00 minimum. The fan wheel is dynamically balanced at the factory.

Filters
One-inch throwaway filters are installed in the coil section of the unit.

Unit Controls
All units are provided with a terminal block.

Agency Listing
The unit has the US Underwriter's Laboratory agency listing and/or the Canada CSA agency listing.

Deluxe Self-Contained Options

Protective Coating

Unit
The unit's exterior and exposed interior shall have a four to six mil coat protective coating.

Coil
The evaporator coil shall have a corrosion protective coating consisting of a conversion layer and a polyurethane top layer applied to protect in harsh environments.

Hydronic Heating Coils

Hot Water
The hot water coil shall be a two-row, type WC heating coil and is field installed inside the unit's cabinet.

Steam
The 3, 5, and 7.5-ton steam coil shall be a one-row, type SDS heating coil. The 10 and 15 ton steam coil shall be a one-row, type NS heating coil. Steam coils shall be field installed inside the unit's cabinet.

Discharge Plenum
The discharge plenum shall be provided with double deflection louvers to provide horizontal discharge.

Cupro-Nickel Condenser
The condenser shall be shell and coil design with 90-10 cupro-nickel inner tubing. Piping connections shall be made from either side of the unit. Each refrigerant circuit shall be provided with a separate condenser or pair of condensers. Condenser waterside working pressure shall be 400 psig.

Permanent Filter
One-inch permanent filters shall be provided for field installation in the coil section of the unit.

Return Air Grille
A decorative return air grille shall be provided for field installation on 10 and 15-ton units.

Oversized Fan Motor Kit
Oversized fan motors and drive kits shall be available for those applications where external static pressure exceeds the capability of the standard fan motor.

Water Regulating Valve
A water regulating valve shall be provided for each condenser circuit to control condensing pressure. The $^{3}/_{4}$-inch valve includes a capillary tube adapter fitting to connect the liquid line Shrader valve. The water regulating valve drops the waterside operating pressure to 250 psig.

Mechanical Specifications

Time Delay Relay
A time delay relay shall provide a four minute time delay prior to starting the second compressor on 10 and 15-ton units to help prevent power demand surges.

Anti-Recycle Timer
An anti-recycle timer shall be provided to protect the compressor from excessive cycling. Compressors will lock out for five minutes when either the thermostat contacts open or there is a momentary power outage.

Rubber-in-Shear Isolation
Rubber-in-shear isolation pads shall be provided for installation under the base of the unit for vibration isolation.

Spring Isolation
Spring vibration isolators shall be provided for installation under the base of the unit for vibration isolation.

Unit Mounted Thermostat
Unit mounted cooling only thermostat with up to two stages of cooling can be factory or field installed on the unit.

Remote Mounted Thermostat
A remote 0heat/2cool thermostat shall be provided on 3, 5, and 7.5 ton units. A remote 2heat/2cool manual or auto thermostat shall be provided on 10 and 15-ton units.

Remote Programmable Thermostat
A remote programmable 1heat/2cool thermostat shall be provided on 3, 5 and 7.5 ton units. A remote programmable 2heat/2cool thermostat shall be provided on 10 and 15-ton units.

Remote Air-Cooled Condenser CCRA/CIRA

Cabinet
The unit framework is formed of heavy gauge welded steel. Exterior panels are fabricated from 18-gauge galvanized steel.

Refrigerant Circuits and Controls
The 3, 5, and 7.5-ton units shall have a single refrigerant circuit and the 10 and 15-ton unit have dual refrigeration circuits. All units are provided with an integral subcooling circuit and factory installed controls to run the unit fans. The control panel includes fan motor contactors, a terminal block connection for compressor interlock, and a 115-volt control power transformer.

Condenser Coil
A condenser coil with a slab-type arrangement is provided. The coil is constructed of seamless, $^{3}/_{8}$-in (9.5 mm) O.D. copper tubes, expanded into aluminum fins. Each circuit includes an integral subcooler. The coil is leak-tested under water at 425 psig.

Condenser Fan and Motor
Condenser fans are weatherproof with a permanently lubricated motor and built-in thermal overload protection. Fans are direct drive type and are statically and dynamically balanced at the factory. The 3 and 5-ton units have a single condenser fan. The 7.5 and 10-ton units have two condenser fans. The 15-ton unit has four condenser fans.

Protective Coating Option Unit
The unit interior and exterior shall have a four to six mil protective coating applied with an air-dry process.

Condenser Coil
The condenser coil has a corrosion protective coating consisting of a conversion layer and a polyurethane top layer applied to protect from harsh environments.

Low Ambient Operation Option
The low ambient damper allows operation down to 0°F (-17.78°C) by utilizing additional fan cycling and an external damper assembly for head pressure control. The low ambient damper includes a 16-gauge damper assembly, HCFC-22 operator, tubing and adapter fittings, rubber grommet, and all necessary mounting hardware and instructions for field installation.

Agency Listing
The unit has the US Underwriter's Laboratory agency listing and/or the Canada CSA agency listing.

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The Trane Company
A Division of American Standard Inc.
www.trane.com

For more information, contact your local Trane office or e-mail comfort@trane.com

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